Ontario

Modular Training Standards

Surface Diamond Driller
–Common Core Helper Level and Runner Level

Program #770200

Modular Training Standards

Surface Diamond Driller
–Common Core Helper Level and Runner Level

Program #770200

Printing date: July 2008

This document is the property of the trainee/ employee named inside and represents the official record of his/her training.

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TRAINING UNITS

NUMBER TITLE

COMMON CORE HELPER LEVEL

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NUMBER TITLE

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NUMBER TITLE

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COMPETENCY ANALYSIS PROFILE
SURFACE DIAMOND DRILLER
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ON-THE-JOB TRAINING STANDARDS SKILLS

AREAS OF COMPETENCY
COMMON CORE - HELPER LEVEL

FOLLOW SURFACE DIAMOND DRILL INDUCTION PROCEDURES **U0669**	Identify drill site work area U0669.01	Prepare to respond to emergencies U0669.02	Follow company policies U0669.03	Identify joint health and safety representatives and/or committee members U0669.04	Operate/use communication systems U0669.05

WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT **U0652**	Wear, adjust, and maintain personal protective equipment (PPE) U0652.01	Inspect workplace and travel ways U0652.02	Erect safety signs/barricades U0652.03	Operate fire extinguisher(s) U0652.04	Select hand and power tools U0652.05
	Deal with hazardous or potentially hazardous conditions in the workplace U0652.06	Work safely around hazardous materials U0652.07	Perform emergency shutdown U0652.08	Work around mobile equipment U0652.09	Work around rotating, stationary and portable equipment U0652.10
	Work from tower/elevated work platform U0652.11	Lift and carry materials and/or supplies manually U0652.12	Lock out and tag mobile and fixed equipment U0652.13	Perform emergency evacuation U0652.14	Practise good housekeeping in the workplace U0652.15

OPERATE HAND AND POWER TOOLS **U0653**	Inspect hand tools U0653.01	Operate hand tools U0653.02	Maintain and store hand tools U0653.03	Inspect electrically powered hand tools U0653.04	Operate electrically powered hand tools U0653.05
	Maintain and store electrically powered hand tools and attachments U0653.06				

PROTECT THE NATURAL ENVIRONMENT **U0668**	Follow the Environmental Plan U0668.01	Install containment measures U0668.02	Manage spills and solid wastes U0668.03	Manage hazardous materials U0668.04	Prevent forest fires around work site U0668.05

PERFORM GENERAL LOCK OUT AND TAG ON PRIME MOVERS AND OTHER RELATED EQUIPMENT **U0670**	Identify and respond to workplace hazards U0670.01	Identify prime mover(s) and other related equipment to be locked out and tagged for repair, maintenance/inspection, and/or clean up U0670.02	De-energize system and other related equipment to ensure zero energy state U0670.03	Lock out and tag prime mover(s) and other related equipment U0670.04	Verify zero energy state U0670.05
	Perform work to be done U0670.06	Remove lock(s) and tag(s) U0670.07	Energize prime mover(s) and other related equipment U0670.08		

OPERATE CHAIN SAW **U0654**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0654.01	Perform pre-operational checks on chain saw U0654.02	Start up chain saw U0654.03	Conduct operational checks on chain saw U0654.04	Operate chain saw U0654.05
	Maintain chain saw U0654.06	Perform post-operational checks on chain saw U0654.07			
OPERATE LIFTING MECHANISM(S) **U0655**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0655.01	Perform pre-operational checks on lifting mechanism(s) U0655.02	Conduct operational checks on lifting mechanism(s) U0655.03	Select slinging equipment U0655.04	Raise and lower materials/equipment using lifting mechanism(s) U0655.05
	Shut down lifting mechanism(s) U0655.06				
OPERATE PORTABLE PUMPING EQUIPMENT **U0656**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0656.01	Set-up portable pumping equipment U0656.02	Conduct pre-operational checks on portable pumping equipment U0656.03	Start up the portable pumping equipment U0656.04	Operate portable pumping equipment U0656.05
	Monitor portable pumping equipment operation U0656.06	Shut down portable pumping equipment U0656.07	Refuel portable pumping equipment U0656.08	Perform maintenance and adjustments on portable pumping equipment U0656.09	
RECOVER AND HANDLE CORE **U0657**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0657.01	Empty core tube U0657.02	Place core in core box(es) U0657.03	Prepare core box (es) for transportation U0657.04	Prepare and maintain in hole tools U0657.05

OPERATE SKIDDER **U0658**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0658.01	Perform pre-operational checks on skidder U0658.02	Start up skidder U0658.03	Conduct operational checks on skidder U0658.04	Operate skidder to move equipment/product/ material U0658.05
	Shut down skidder 0658.06	Refuel skidder 0658.07	Perform maintenance and adjustments on skidder 0658.08		
OPERATE TRACK VEHICLE **U0659**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0659.01	Perform pre-operational checks on track vehicle U0659.02	Start up track vehicle U0659.03	Conduct operational checks on track vehicle U0659.04	Operate track vehicle U0659.05
	Shut down track vehicle U0659.06	Refuel track vehicle U0659.07	Perform maintenance and adjustments on track vehicle U0659.08		
OPERATE SNOW MOBILE **U0660**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0660.01	Perform pre-operational checks on snow mobile U0660.02	Start up snow mobile U0660.03	Conduct operational checks on snow mobile U0660.04	Operate snow mobile to move personnel/ equipment/product/ material U0660.05
	Shut down snow mobile U0660.06	Refuel snow mobile U0660.07	Perform maintenance and adjustments on snow mobile U0660.08		

OPERATE ALL-TERRAIN VEHICLE **U0661**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0661.01	Perform pre-operational checks on all-terrain vehicle U0661.02	Start up all-terrain vehicle U0661.03	Conduct operational checks on all-terrain vehicle U0661.04	Operate all-terrain vehicle to move personnel/equipment/ product/material. U0661.05
	Shut down all-terrain vehicle U0661.06	Refuel all-terrain vehicle U0661.07	Perform maintenance and adjustments on all-terrain vehicle U0661.08		

OPERATE PORTABLE GENERATOR **U0662**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0662.01	Perform pre-operational checks on portable generator U0662.02	Operate portable generator under no load conditions U0662.03	Conduct operational checks on portable generator under load U0662.04	Shut down portable generator U0662.05
	Refuel portable generator U0662.06	Perform maintenance and adjustments on portable generator U0662.07			

LOAD AND UNLOAD PERSONNEL AND EQUIPMENT FROM HELICOPTER **U0664**	Read layout prior to commencement of work U0664.01	Inspect the workplace for hazardous and/or potentially hazardous conditions U0664.02	Work around helicopter U0664.03	Plan helicopter move of equipment and supplies to designated sites U0664.04	Prepare and maintain work sites U0664.05
	Prepare/secure loads for transport U0664.06	Attach load to helicopter for slinging U0664.07	Receive load from helicopter U0664.08		

OPERATE WATER CRAFT **U0671**	Inspect the workplace for hazardous and/or potentially hazardous conditions U0671.01	Perform pre-operational checks on water craft U0671.02	Start up water craft U0671.03	Conduct operational checks on water craft U0671.04	Operate water craft to move personnel/ equipment/product/ material U0671.05
	Shut down water craft U0671.06	Refuel water craft U0671.07	Perform maintenance and adjustments on water craft U0671.08		
GROUT DIAMOND DRILL HOLES **U0672**	Identify and respond to workplace hazards U0672.01	Inspect workplace and travel ways U0672.02	Read daily report/logbook U0672.03	Select grouting equipment U0672.04	Perform pre-operational checks on grouting equipment with controls in neutral position U0672.05
	Start up grouting equipment U0672.06	Conduct operational checks on grouting equipment U0672.07	Perform grouting U0672.08	Maintain grouting equipment U0672.09	Tear down and store grouting equipment U0672.10
READ AND INTERPRET LAYOUT(S)/ DRILL HOLE PLAN **U0673**	Interpret standard symbols, plans, grid line(s) and construction drawings U0673.01	Use layout(s)/drill hole plan, measuring and reference devices U0673.02	Communicate the current status of layout/drill hole plan information to co-workers and others as required U0673.03	Verify drilling specifications U0673.04	Identify and respond to safety notices U0673.05

RUNNER LEVEL

PERFORM SURFACE DIAMOND DRILLING-GENERAL **U0665**	Identify and respond to workplace hazards U0665.01	Inspect workplace and travel ways U0665.02	Plan transport of equipment/ material/supplies to the next drill site/location U0665.03	Determine method for transporting equipment/ materials/supplies U0665.04	Secure loads for transport of drill and equipment U0665.05
	Plan and organize drill site U0665.06	Set up drill U0665.07	Install safety devices U0665.08	Set up safety barriers U0665.09	Read/maintain daily drill report/log book before operating drill U0665.10
	Perform pre-operational checks on drill with controls in neutral position U0665.11	Start up drill U0665.12	Conduct operational checks on drill U0665.13	Drill hole to predetermined to depth U0665.14	Check for the presence of hazardous gases U0665.15
	Shut down drill U0665.16	Maintain drilling equipment U0665.17	Tear down drill equipment U0665.18		

PERFORM SURFACE DIAMOND DRILLING - ICE **U0666**	Identify and respond to workplace hazards U0666.01	Inspect workplace and travel ways U0666.02	Plan transport of equipment/ material/supplies to the next drill site/location U0666.03	Determine method for transporting equipment/ materials/supplies U0666.04	Secure loads for transport of drill and equipment U0666.05
	Plan and organize drill site/workplace U0666.06	Set up drill U0666.07	Install safety devices U0666.08	Set up safety barriers U0666.09	Read/maintain daily drill report/log book before operating drill U0666.10
	Perform pre-operational checks on drill U0666.11	Start up drill U0666.12	Conduct operational checks on drill U0666.13	Drill hole to predetermined depth U0666.14	Check for the presence of hazardous gases U0666.15
	Shut down drill U0666.16	Maintain drilling equipment U0666.17	Tear down drill equipment U0666.18		

PERFORM SURFACE DIAMOND - BARGE **U0667**	Identify and respond to workplace hazards U0667.01	Inspect workplace and travel ways U0667.02	Plan transport of equipment/ material/supplies to the next drill site/location U0667.03	Determine method for transporting equipment/ material/supplies U0667.04	Secure loads for transport on drill/service barge U0667.05
	Set up drill U0667.06	Install safety devices U0667.07	Set up safety barriers U0667.08	Read/maintain daily drill report/log book before operating drill U0667.09	Perform pre-operational checks on drill U0667.10
	Start up drill U0667.11	Conduct operational checks on drill U0667.12	Drill hole to predetermined depth U0667.13	Check for the presence of hazardous gases U0667.14	Shut down drill U0667.15
	Maintain drilling equipment U0667.16	Tear down drill equipment U0667.17			

PREFACE

This training document was developed by the Ministry of Training, Colleges and Universities, in consultation with representatives from the industry. These Training Standards are intended to be used by trainees, trainers/instructors, and companies as a "blueprint" for training or as a prerequisite for government accreditation/certification. Although this training document is intended as a guideline for training, all issues might not apply in all operations.

A Surface Diamond Driller – Helper is a worker who has achieved accreditation in the Common Core Helper modules from Program #770200 required for the Certificate of Achievement (C of A). A Surface Diamond Driller – Runner is a worker who has achieved accreditation in the Helper Common Core and Runner modules from Program #770200 required for the Certificate of Qualification (C of Q).

The first five modules of the Common Core Helper Level of Program #770200 must be completed before all other modules in Program #770200 and before the worker is permitted to work in a surface diamond drilling operation. Once these first five modules have been successfully completed, the order in which the other modules are trained is flexible and can vary. Prerequisites must be met before training and accreditation can proceed.

The first five modules are:

- Follow Surface Diamond Drill Induction Procedures, U0669,
- Work Safely in a Surface Diamond Drilling Environment, U0652
- Operate Hand and Power Tools, U0653,
- Protect the Natural Environment, U0668
- Perform General Lock Out and Tag on Prime Movers and Other Related Equipment, U0670.

The employer must provide the worker with the entire Common Core Helper Level for the Surface Diamond Driller, Program #770220, before the worker has completed a total of 12 months of employment as a helper or runner in diamond drilling operations.

Program Prerequisites:

1. A Standard Level WSIB approved, first aid certificate is a prerequisite to commencing training and accreditation in Program #770200.
2. The first five modules of the Common Core Helper Level for Program #770200 are prerequisites to the other modules of the Program.

Program Prerequisites cont'd:

3. An additional prerequisite to Operate Lifting Mechanism(s), U0655 is successful completion of an Occupational Health and Safety Act (OHSA) oriented training course on slinging/rigging and general usage.
4. An additional prerequisite to Load and Unload Equipment and Personnel from Helicopter, U0664 is Operate Lifting Mechanism(s), U0655.
5. The prerequisite to all Runner Level modules is accreditation in U0669, U0652, U0653, U0654, U0655, U0656, U0657, U0668, U0670 and one of U0658 or U0659 of the Common Core Helper Level for Program #770200.
6. An additional prerequisite to Perform Surface Diamond Drilling - Ice, U0666 and Perform Surface Diamond Drilling – Barge, U0667 is Perform Surface Diamond Drilling – General, U0665.

The Certificate of Achievement (C of A), Program #770200 Common Core Helper Level:

To be accredited in the C of A for the Common Core Helper Level of Program #770200 the employee must have satisfied the Standard Level WSIB approved first aid certificate prerequisites and demonstrated competency in each of the following modules from Program #770200:

- U0669, U0652, U0653, U0668, and U0670
- Operate Chainsaw, U0654, Operate Lifting Mechanism(s), U0655,
- Operate Portable Pumping Equipment, U0656, Recover and Handler Core, U0657,
- plus **one** of Operate Skidder, U0658 **or** Operate Track Vehicle, U0659

Training and accreditation in the 7 remaining modules of the Common Core Helper Level is not required to achieve a C of A in the Program. However surface diamond drilling helper employees must be trained and accredited in any of the following government-recognized module(s) from Program #770200 that pertain to their job responsibilities.

- Operate Snow Mobile, U0660,
- Operate All-Terrain Vehicle, U0661,
- Operate Portable Generator, U0662,
- Load and Unload Personnel and Equipment from Helicopter, U0664,
- Operate Water Craft, U0671,
- Grout Diamond Drill Holes, U0672,
- Read and Interpret Layout(s)/Drill Hole Plan, U0673.

The Certificate of Qualification (C of Q) Accreditation, Program #770200:

To be accredited in the Certificate of Qualification (C of Q) for Program #770200, the employee must have demonstrated competency in each of the following modules:

- U0669, U0652, U0653, U0668, U0670, U0654, U0655, U0656, U0657
- plus one of U0658 or U0659
- plus U0665.

Training and accreditation in the other modules of the Runner Level is not required to achieve a C of Q in the Program. However surface diamond drilling runner employees must be trained and accredited in any of the following government-recognized module(s) from Program #770200 that pertain to their job responsibilities.

- Perform Surface Diamond Drilling – Ice, U0666,
- Perform Surface Diamond Drilling – Barge, U0667.

General Program Guidelines:

- An operating surface diamond drill operation is a site where drilling operations and core/sludge sample recovery are undertaken for the purpose of opening up or proving any metallic minerals. It is where a worker can demonstrate the performance objectives as outlined in a specific module.

- New trainees and experienced surface diamond drillers – helpers and runners, must obtain accreditation in the same way. Each must demonstrate the skills specified in each module to the described minimal acceptable standard. These demonstrations must be administered in an operating surface diamond operation site by a trainer designated by the signing authority who shall follow the Performance Demonstration Guidelines approved by the Mining Tripartite Committee.

- Surface diamond drill helper and runner workers must be trained and accredited in the government recognized module(s) in the program that pertain to their job responsibilities. This training and accreditation must be completed in a timely fashion.

- The MTCU Program Signing Authority has ultimate responsibility for trainers and the quality of training under his/her program. This responsibility holds whether the trainer(s) being used is an in-house or external trainer.

General Program Guidelines cont'd

- The MTCU Program Signing Authority cannot sign him/herself off on the MTCU Training Report. In this case his/her signature on the Training Report must be co-signed by a qualified trainer as per the Trainer Qualification and Criteria Requirements other than him/herself.

- MTCU Program Signing Authority is not transferable and may be suspended or revoked by MTCU for due cause.

- It is the responsibility of the MTCU Program Signing Authority to confirm that the company employees have met the prerequisites of the Program. These prerequisites must be completed before training in a module can be started.

- Performance Objectives must be signed off by the trainer when the trainee has achieved competence in the skill. For the purposes of MTCU programs competence is achieved when the trainee is able to perform the skills repeatedly and without assistance in the workplace to the standard set out in the Training Standard document.

- The Training Standard book is the property of the employee. The MTCU Program Signing Authority is encouraged to maintain a copy of their employee's signed-off Training Standard document in the company records. If the employee ceases to work for the company they are to be given their Training Standard document.

- The employer has a responsibility to also train workers who are not surface diamond drillers - helpers and runners for the work to be done - e.g. mechanics going to drill site. These workers may be trained in modules from Program #770200 which the employer deems useful. Please note however that this training is not to be registered with the Ministry of Training, Colleges and Universities.

The care and maintenance of this book is the joint responsibility of the trainee/worker and the employer and is the property of the trainee/worker. The Training Standards were developed specifically for documenting the worker's/trainee's acquisition of skills.

Throughout the document the term "including" is often used. "Including" means: one or more of the items listed, but not limited to those items included in the list.

IMPORTANT DIRECTIONS TO TRAINERS

Trainers instructing workers in this Surface Diamond Driller Common Core Helper Level and Runner Level Program must themselves be accredited in the Surface Diamond Driller Common Core Helper Level and the Runner Level modules they will be instructing of the Program #770200. They must meet the Trainer Guidelines for the Program.

The Training Standards identify skills required for this occupation and its related training program.

These Training Standards have been written in concise statements that describe how well a trainee must perform each skill in order to become competent.

In using these Training Standards, trainers will be able to ensure that the worker/trainee is developing the skills detailed for the occupation.

Trainers and workers/trainees are required to sign off on and date the skills/Performance Objectives, following each successful acquisition. Performance Objectives must be signed off by the trainer when the trainee has achieved competence in the skill. For the purposes of MTCU programs competence is achieved when the trainee is able to perform the skills repeatedly and without assistance in the workplace to the standard set out in the Training Standard document.

Employers participating in this training program will be designated as the Signing Authority and are required to attest to the successful achievement in the space provided at the end of each unit.

LIST OF MINING PROGRAMS

- P770010 Common Core and Specialty Modules for Underground Hard Rock Miner
- P770121 Common Core for First Line Underground Mine Supervisor – Underground Hard Rock Mining
- P770130 Common Core and Specialty Modules for Underground Soft Rock Miner
- P770131 Common Core for First Line Underground Mine Supervisor - Underground Soft Rock Mining Skills
- P770141 Common Core for Generic First Line Supervisor - Surface Mining, Surface and Underground Diamond Drilling Operations and Underground and Surface Mining Trades
- P770150 Common Core for Basic Underground Diamond Driller (Helper and Runner Level)
- P770200 Surface Diamond Driller – Common Core Helper Level and Runner Level
- P770210 Common Core for Surface Miner, Specialty Modules for Surface Miner
- P770225 Common Core for Basic Underground Hard Rock Mine Service Types
- P810050 Common Core for Basic Mills Process Operations - Mineral Ore, Specialty Modules Program for Mill Process Operators - Mineral Ore
- P810080 Common Core for Basic Smelter Operations - Mineral Ore
- P810090 Common Core for Non-Production Workers in a Smelter Operation - Mineral Ore

COMMITTEES

The Ministry is grateful for the cooperation and contribution of the following committees in the development and maintenance of the Common Core and Specialty Skills Modules Programs

Review and Development Committee

Labour/Worker Reps:

Stephen Cromier	Major Drilling Group Ltd.
Dan Kalnins	Heath and Sherwood Drilling (1986) Inc.
Luc Malo	Boart Longyear Inc.
Pat Rancourt	Bradley Brothers Ltd
Pete Richer	United Steel Workers, Local 6500
James Niemi	United Steel Workers, Local 6500

Management Reps:

Sylvie McPhail	Bradley Brothers Ltd
Bill Krasnozon	Boart Longyear Inc.
Brad Pullen	Heath and Sherwood Drilling (1986) Inc.
Herb Phelps	Falconbridge Limited
Clayton Parsons	Major Drilling Group Ltd.

Resource Persons:

Rick Bertrand	United Steel Workers, Local 6500
Randi Condie	United Steel Workers, Local 6500
Arno Sakki	Mine, Mill CAW/Local 598
Glenn Staskus	Mine, Mill CAW/Local 598
Abate W. Abate	Ministry of Training, Colleges and Universities
Lisa Heffern	Ministry of Training, Colleges and Universities
Gerald Allan	Ontario Ministry of Labour
Charles Kennedy	Ontario Ministry of Labour
Michelle Chandler	Ministry of Training, Colleges and Universities

Mining Tripartite Committee

Labour:

Richard Bertrand	United Steelworkers, Local 6500
Mike Fleury	United Steelworkers, Local 6500
Shawn Matthews	United Steelworkers, Local 6500
James Niemi	United Steelworkers, Local 6500
Glenn Staskus	Mine, Mill CAW/Local 598
Dave Stewart	Mine, Mill CAW/Local 598

Management:

Bill Krasnozon	Boart Longyear Inc. /Northern Safety Association
Steve Ball	Vale Inco Limited
Richard Guillemette	Dumas Contracting Ltd (Ontario Mine Contractors Safety Association - OMCSA)
Greg Warnock	Xstrata Ltd.
Pierre Paquette	Sifto Salt /Southern Safety Association
Loye Halteman	Goldcorp, Red Lake
Steve Drew	Nelson Aggregate Co(Ontario Stone, Sand and Gravel Association– OSSGA)

Resource:

Abate W. Abate	Ministry of Training, Colleges and Universities
Gerald Allan	Ontario Ministry of Labour
Robert Bertrand	Ontario Ministry of Labour
John Blogg	Ontario Mining Association
Michelle Chandler	Ministry of Training, Colleges and Universities
Lisa Heffern	Ministry of Training, Colleges and Universities, Sudbury

IMPORTANT DIRECTIONS TO THE TRAINEE

Trainee

1. All hours working for each employer(s) must be recorded in the Employer Information section.

2. It is the responsibility of the trainee to inform the local Apprenticeship Client Services office regarding the following changes:

   - change of trainee name or address
   - transfer to a new employer

3. Training Reports must be signed for modular trainees by a Ministry of Training, Colleges and Universities designated Signing Authority and forwarded to a local Apprenticeship Client Services office.

4. At the completion of training, the Trainee Completion Form must be completed, signed off on by the Signing Authority, and submitted to local Apprenticeship Client Services office.

NOTICE/DECLARATION FOR COLLECTION OF PERSONAL INFORMATION

1. This information is collected under the authority of the Order-In-Council Number 701/85.

2. The information is collected for the purpose of administering this modular training program within the Province of Ontario.

3. Questions regarding collection and use of this information may be directed to:

Director of Apprenticeship
Ministry of Training, Colleges and Universities
Service Delivery Branch
33 Bloor St. E. 2nd Floor
Toronto, Ontario
M7A 2S3
(416) 314-4268

TRAINEE RECORD

Trainee Name: _____

Contract Number: _____
(if applicable)

_____

EMPLOYER INFORMATION

Company: _____

Address: _____

_____

Telephone: _____

EMPLOYER INFORMATION

Company: _____

Address: _____

_____

Telephone: _____

_____

EMPLOYER INFORMATION

Company: _____

Address: _____

_____

Telephone: _____

EMPLOYER INFORMATION

Company: _____

Address: _____

_____

Telephone: _____

_____

EMPLOYER INFORMATION

Company: _____

Address: _____

_____

Telephone: _____

TRAINEE COMPLETION FORM

Trainee Name: _____
Print

_____
Signature

Social Insurance Number: _____

Training Units when completed should be signed off by the Trainer/Signing Authority Employer on the following page and presented with this completion form to your local Apprenticeship Client Services office. Any supporting documentation should also be attached.

Employer Name: _____

Address: _____

Telephone: _____

Signing Authority: _____
Signature

TRAINING UNIT COMPLETION FORM

COMMON CORE HELPER LEVEL

TRAINING UNITS	TITLE	SIGNING AUTHORITY
U0669	Follow Surface Diamond Drill Induction Procedures	_____
U0652	Work Safely in a Surface Diamond Drilling Environment	_____
U0653	Operate Hand and Power Tools	_____
U0668	Protect the Natural Environment	_____
U0670	Perform General Lock Out and Tag on Prime Movers and other Related Equipment	_____
U0654	Operate Chainsaw	_____
U0655	Operate Lifting Mechanism(s)	_____
U0656	Operate Portable Pumping Equipment	_____
U0657	Recover and Handle Core	_____
U0658	Operate Skidder	_____
U0659	Operate Track Vehicle	_____
U0660	Operate Snow Mobile	_____
U0661	Operate All-Terrain Vehicle	_____

TRAINING UNIT COMPLETION FORM - Cont'd

COMMON CORE HELPER LEVEL

TRAINING UNITS	TITLE	SIGNING AUTHORITY
U0662	Operate Portable Generator	_____
U0664	Load and Unload Personnel and Equipment from Helicopter	_____
U0671	Operate Water Craft	_____
U0672	Grout Diamond Drill Holes	_____
U0673	Read and Interpret Layout(s)/Drill Hole Plan	_____

RUNNER LEVEL

TRAINING UNITS	TITLE	SIGNING AUTHORITY
U0665	Perform Surface Diamond Drilling - General	_____
U0666	Perform Surface Diamond Drilling - Ice	_____
U0667	Perform Surface Diamond Drilling - Barge	_____

U0669 FOLLOW SURFACE DIAMOND DRILL INDUCTION PROCEDURES

GENERAL PERFORMANCE OBJECTIVE

Follow surface diamond drill induction procedures, by identifying drill site work area; preparing to respond to emergencies; following company policies; identifying joint health and safety representatives/and or committee members; and operating/using communication systems according to environmental plan, government legislation, company standards and manufacturer specifications.
Notes: 1. To be trained and accredited in this module the prerequisite is a Standard Level WSIB approved, first aid certificate. 2. The first five modules of Program #770200's Common Core Helper Level must be completed before all other modules and before the worker is permitted to work in a surface diamond drilling operation.

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0669.01 Identify drill site work area, including: First Aid, Health and Safety, Supervisor Area, dry facility, drill shack, pump shacks, core shacks, power lines and water source, Material Safety Data Sheets (MSDS), Occupational Health and Safety Act (OHSA), material storage, fuel/propane storage, travel routes and communication systems to ensure familiarity with drill site layout according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0669 **FOLLOW SURFACE DIAMOND DRILL INDUCTION PROCEDURES** (cont.)

U0669.02 Prepare to respond to emergencies, including: accidents, injuries, fires, encounters with wildlife, spills, extreme weather conditions, and ice conditions, by following procedures and emergency response plan, including: identifying evacuation routes, identifying posted emergency numbers and contacts, reporting to supervisor; and noting location of emergency/fire fighting equipment and supplies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0669.03 Follow company policies, including: health and safety, reporting of hazards, incidents and accidents, harassment, discipline, and written procedures, and working alone procedures, by locating and reviewing manuals according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0669.04 Identify joint health and safety representatives and/or committee members, by locating their posted contact information, including: name(s) and telephone numbers according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0669 **FOLLOW SURFACE DIAMOND DRILL INDUCTION PROCEDURES** (cont.)

U0669.05 Operate/use communication systems, including: daily reports, cell/satellite phones, multi-channel radios, telephones, fax machines, bulletin boards, safety signs, information boards and newsletters, by identifying their location and using them to convey and obtain information according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0652 **WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT**

GENERAL PERFORMANCE OBJECTIVE

Work safely in a surface diamond drilling environment, by wearing, adjusting and maintaining personal protective equipment (PPE); inspecting workplace and travel ways; erecting safety signs/barricades; operating fire extinguisher(s); selecting hand and power tools; dealing with hazardous or potentially hazardous conditions in the work place; working safely around hazardous materials; performing emergency shutdown; working around mobile equipment; working around rotating, stationary and portable equipment; working from tower/elevated work platform; lifting and carrying materials and/or supplies manually; locking out and tagging mobile and fixed equipment; performing emergency evacuation; and practicing good housekeeping in the workplace according to environmental plan, government legislation, company standards and manufacturer specifications.
Notes: 1. To be trained and accredited in this module the prerequisite is a Standard Level WSIB approved, first aid certificate. 2. The first five modules of Program #770200's Common Core Helper Level must be completed before all other modules and before the worker is permitted to work in a surface diamond drilling operation.

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____

Trainee's Name (Print) _____

SKILLS

U0652.01 Wear, adjust, and maintain personal protective equipment (PPE), for the task to be performed, including eye, hand, foot, head, ear, respiratory, skin, body and fall-arrest system, by ensuring optimum fit and protection to the wearer; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652 WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT (cont.)

U0652.02 Inspect workplace and travel ways, by using PPE; ensuring floors are free of debris, including: ice, drilling muds, grease and oils; clearing obstructions; observing weather conditions, including: snow, rain, thunder storms and fog; picking up debris; following good housekeeping practices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.03 Erect safety signs/barricades, including information, direction, cautionary, and danger, by using PPE; identifying hazards; informing employees of potential hazards; isolating the area to prevent personal injury; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.04 Operate fire extinguisher(s), including: A, B, C, and ABC units, to control and/or put out fires, including: paper, wood, trash, flammable liquids, lubricants, paints and electrical and repair and/or report deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652 WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT (cont.)

U0652.05 Select hand and power tools, including: axes, wrenches, picks, shovels, pinch bars, chainsaws, electric tools and drills, by using PPE; ensuring that the tool selected is suitable for the job, is in good condition and has guards in place so that no injury occurs to workers or damage to tool; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.06 Deal with hazardous or potentially hazardous conditions in the work place, including: rough terrain/water, swamps, radio active materials, gases, thin ice and other environmental hazards and energy sources, including: gases, kinetic, stored, thermal, electrical, pressure and chemical, by using PPE; observing warning signals, alarms and signs; correcting and/or reporting hazards; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652 **WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT** (cont.)

U0652.07 Work safely around hazardous materials, by using PPE; observing warning-signs and labels; referring to Material Safety Data Sheets (MSDS); identifying hazardous materials; locating first aid facilities; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.08 Perform emergency shutdown, by using PPE; de-activating power sources; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.09 Work around mobile equipment, by using PPE; using hand signals; remaining visible; maintaining a safe distance from the equipment and loads in tow; staying clear of suspended loads; obeying vehicle warning signals and alarms; yielding the right of way; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652 WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT (cont.)

U0652.10 Work around rotating, stationary and portable equipment, including: drill, pumps, pneumatic equipment, high pressure hoses and generators, by using PPE; ensuring guards are in place; working from a safe location; observing alarms and warning systems; communicating with co-workers; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.11 Work from tower/elevated work platform, by using, adjusting and maintaining PPE including: fall arrest system and trauma straps; mounting and dismounting tower/platform, using 3 point contact; ensuring rescue and retrieval procedures are in place; inspecting principal components and related equipment including: hand rails, steps, ladders, walk ways, machine guards, mast/tower and mast/tower accessories, hoist and hoist components, basket, rod rack, limit controls and sheaves; checking lighting and warning systems; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652 **WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT** (cont.)

U0652.12 Lift and carry materials and/or supplies manually, by following lifting techniques, including: seeking assistance; ensuring sound footing and a clear path; using PPE; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.13 Lock out and tag mobile and fixed equipment, for repair and maintenance, including: drill rigs, pumps, skidders, tractors and personnel carriers, by using PPE; shutting down and de-energizing equipment; placing wheel chocks; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652.14 Perform emergency evacuation, by being aware of escape way locations, routes and markings; following fire and emergency procedures, and repairing and/or reporting deficiencies according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0652 WORK SAFELY IN A SURFACE DIAMOND DRILLING ENVIRONMENT (cont.)

U0652.15 Practice good housekeeping in the workplace, by using PPE; maintaining a clean work area free of obstructions; cleaning up spills and/or leaks; storing tools and equipment to minimize incidents, accident or injury to self and others; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0653 OPERATE HAND AND POWER TOOLS

GENERAL PERFORMANCE OBJECTIVE

Operate hand and power tools, by inspecting hand tools; operating hand tools; maintaining and storing hand tools; inspecting electrically powered hand tools; operating electrically powered hand tools; and maintaining and storing electrically powered hand tools according to environmental plan, government legislation, company standards and manufacturer specifications. *Notes: 1. To be trained and accredited in this module the prerequisite is a Standard Level WSIB approved, first aid certificate. 2. The first five modules of Program #770200's Common Core Helper Level must be completed before all other modules and before the worker is permitted to work in a surface diamond drilling operation.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____

Trainee's Name (Print) _____

SKILLS

U0653.01 Inspect hand tools, including: pipe wrenches, tube wrenches, hammers, screw drivers, saws, axes and tool attachments, by using personal protective equipment (PPE); and checking tools for damage, hazards and general condition to protect self and others according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0653 OPERATE HAND AND POWER TOOLS (cont.)

U0653.02 Operate hand tools, using PPE, by working from a safe location; securing object(s) to be worked on; and changing attachments as required according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0653.03 Maintain and store hand tools, by using PPE; inspecting tools before, during, and after use; cleaning prior to placing tools in a designated location; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0653.04 Inspect electrically powered hand tools, including: grinders, drills and saws, by; de-energizing equipment; using PPE; checking tools and attachments, including: guards, extension cords and plugs for damage, defects and general condition to protect self and others according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0653 OPERATE HAND AND POWER TOOLS (cont.)

U0653.05 Operate electrically powered hand tools, using PPE, by working from a safe location; securing object(s) to be worked on; and changing attachments as required according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0653.06 Maintain and store electrically powered hand tools and attachments, including: extension cords, by using PPE; inspecting before, during, and after use; cleaning prior to placing tools in a designated location; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0668 PROTECT THE NATURAL ENVIRONMENT

GENERAL PERFORMANCE OBJECTIVE

Protect the natural environment by, following the Environmental Plan; installing containment measures; managing spills and solid wastes; managing hazardous materials; and preventing forest fires around work site according to environmental plan, government legislation, company standards and manufacturer specifications. *Notes: 1. To be trained and accredited in this module the prerequisite is a Standard Level WSIB approved, first aid certificate. 2. The first five modules of Program #770200's Common Core Helper Level must be completed before all other modules and before the worker is permitted to work in a surface diamond drilling operation.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____ Trainee's Name (Print) _____

SKILLS

U0668.01 Follow the Environmental Plan, by determining water source, drill site, habitat, routes, and travel ways; determining materials, methods, and equipment requirements; and using personal protective equipment (PPE) according to government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0668 **PROTECT THE NATURAL ENVIRONMENT** (cont.)

U0668.02 Install containment measures, including: straw, baffles, burlap, posts, gabiens, booms, sumps and fencing, by working with and around equipment; using PPE; and using hand tools, including: shovels, axes and sledgehammers according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0668.03 Manage spills and solid wastes, by using PPE; using hand tools; setting up containment: including absorbent materials, spill kits, straw, baffles and berms; setting up pumps; working with and around equipment; and reporting spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0668.04 Manage hazardous materials, by using PPE; and identifying, handling and storing hazardous materials, including: fuel, lubricants and cleaning solvents according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0668 **PROTECT THE NATURAL ENVIRONMENT** (cont.)

U0668.05 Prevent forest fires around work site, by following procedures and restrictions; using PPE; and using equipment, including: spark arrestors, fire extinguishers, hand tools, pumps and water hoses according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

	Employer's Name	Employer's Signature
	_____	_____

U0670 PERFORM GENERAL LOCK OUT AND TAG ON PRIME MOVERS AND OTHER RELATED EQUIPMENT

GENERAL PERFORMANCE OBJECTIVE

Perform general lock out and tag on prime movers and other related equipment, by identifying and responding to workplace hazards; identifying prime mover(s) and other related equipment to be locked out and tagged for repair, maintenance/inspection and/or clean up; de-energizing system and other related equipment to ensure zero energy state; locking out and tagging prime movers and other related equipment to maintain a zero energy state; verifying zero energy state; performing work to be done; removing lock(s) and tag(s) after ensuring work has been completed; and energizing prime mover(s) and other related equipment according to environmental plan, government legislation, company standards and manufacturer specifications. *Notes: 1. To be trained and accredited in this module the prerequisite is a Standard Level WSIB approved, first aid certificate. 2. The first five modules of Program #770200's Common Core Helper Level must be completed before all other modules and before the worker is permitted to work in a surface diamond drilling operation.*

PERFORMANCE OBJECTIVES

	Trainer's Name (Print)	Trainee's Name (Print)
	_____	_____

SKILLS

U0670.01 Identify and respond to workplace hazards, including: poor ground conditions, environmental hazards, inadequate ventilation, open holes, poor housekeeping, by isolating area to ensure safe working conditions; and repairing and/or reporting deficiencies according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670 **PERFORM GENERAL LOCK OUT AND TAG ON PRIME MOVERS AND OTHER RELATED EQUIPMENT** (cont.)

U0670.02 Identify prime mover(s) and other related equipment to be locked out and tagged for repair, maintenance/inspection, and/or clean up, including: air/water lines and the following forms of energy, including: hydraulic, kinetic, radiation, stored, pneumatic, gravity, electrical, mechanical, chemical and thermal, by reviewing layouts /drawings; using PPE; performing visual inspection; repairing and/or reporting deficiencies; and following instructions according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670.03 De-energize system and other related equipment to ensure zero energy state, by using PPE; operating stop button(s), selector switches, pedals, valves and levers; opening disconnects/breakers; following communication procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670 **PERFORM GENERAL LOCK OUT AND TAG ON PRIME MOVERS AND OTHER RELATED EQUIPMENT** (cont.)

U0670.04 Lock out and tag prime mover(s) and other related equipment, to maintain a zero energy state and prevent unexpected movement, energization, start-up or release of stored energy, by using PPE; installing lock(s) and tag(s) securely; installing blocking devices and/or chains if required; following communication procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670.05 Verify zero energy state, to prevent unexpected movement, energization, start-up or release of stored energy, by using PPE; attempting to operate/energize equipment/machinery/devices/controls in the workplace and by other available means, including: programmable logic controllers (PLCs), and remote controls; following verification procedures; operating start button(s), selector switches, pedals, valves and levers; using test equipment; monitoring devices/gauges; performing visual inspections; following communication procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670 **PERFORM GENERAL LOCK OUT AND TAG ON PRIME MOVERS AND OTHER RELATED EQUIPMENT** (cont.)

U0670.06 Perform work to be done, while prime mover(s) and other related equipment/machinery is blocked, if required, and locked out and tagged securely during service, inspection, clean up, maintenance/repair on machines, equipment, systems or processes; using PPE; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670.07 Remove lock(s) and tag(s), after ensuring work has been completed, by using PPE; following communication procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0670 **PERFORM GENERAL LOCK OUT AND TAG ON PRIME MOVERS AND OTHER RELATED EQUIPMENT** (cont.)

U0670.08 Energize prime mover(s) and other related equipment, by using PPE; activating power sources; removing blocking devices and/or chains; operating start button(s), selector switches, pedals, valves and levers; closing disconnects/breakers; following communication procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0654 OPERATE CHAIN SAW

GENERAL PERFORMANCE OBJECTIVE

Operate chain saw, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on chain saw; starting up chain saw; conducting operational checks on chain saw; operating chain saw; maintaining chain saw; and performing post-operational checks on chain saw according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668 and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0654.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0654 **OPERATE CHAIN SAW** (cont.)

U0654.02 Perform pre-operational checks on chain saw, by inspecting principal components, including: chain, brake/guard, throttle, spark arrestors, exhaust system, pull cord, chassis and shut-off switch; using PPE, including: protective pants/apron, chaps, chainsaw gloves, boots, face shield, hard hat and ear protection; checking chain tension and fluid levels; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0654.03 Start up chain saw, using PPE, by positioning chain saw; activating switch; choking/priming carburetor as required; pulling start cord; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0654.04 Conduct operational checks on chain saw, using PPE, by checking chain tension, brake/guard, chassis, throttle and shut-off switch; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0654 **OPERATE CHAIN SAW** (cont.)

U0654.05 Operate chain saw, using PPE, by following procedures, including: cutting, notching, falling and delimbing; working within the limitations of the chain saw; isolating area to ensure safe working conditions; establishing a safe retreat; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0654.06 Maintain chain saw, using PPE, by checking fluid levels and chain tension; checking for visual defects; sharpening chain; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0654 **OPERATE CHAIN SAW** (cont.)

U0654.07 Perform post-operational checks on chain saw, using PPE, by cleaning saw; inspecting for visual defects; lubricating and sharpening chain; ensuring bar is aligned and free of visual defects; ensuring required chain tension; and storing in designated location with chain guards in place according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0655 OPERATE LIFTING MECHANISM(S)

GENERAL PERFORMANCE OBJECTIVE

Operate lifting mechanism(s), by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on lifting mechanism(s); conducting operational checks on lifting mechanism(s); selecting slinging equipment; raising and lowering materials/equipment using lifting mechanism(s); and shutting down lifting mechanism(s) according to environmental plan, government legislation, company standards, and manufacturer specifications. *Notes: 1. To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, U0670 and successful completion of an Occupational Health and Safety Act (OHSA) oriented training course on slinging/rigging and general usage. 2. Equipment operation includes winches, air/electric chain hoists, chain blocks, block and tackles, and come-alongs.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) Trainee's Name (Print)

_____ _____

SKILLS

U0655.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed Trainer's Signature Trainee's Signature

_____ _____ _____

U0655 OPERATE LIFTING MECHANISM(S) (cont.)

U0655.02 Perform pre-operational checks on lifting mechanism(s), including: main hoist, hydraulic cylinders, wire line hoists, winches, chain hoists, chain blocks and come-alongs, using PPE, by checking power source; checking fluid levels; following lubricating procedures; inspecting principal components, including: guards, cable(s), cable guides, sprockets, chains, block, drum, hook and safety latches, slings and hardware, main disconnect, limit switches, directional controls, stop-start switches, and remote control; checking lighting, warning and communication systems; using fall protection, including: fall-arrest or travel-restraint systems; inspecting/testing braking system; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0655.03 Conduct operational checks on lifting mechanism(s), including: main hoist, hydraulic cylinders, wire line hoist, winches, chain blocks, block and tackle, come-alongs and jacks, using PPE, by activating power sources; operating audio and/or visual communication systems; monitoring equipment operation, gauges and load limits; testing brakes; checking for clearances and activity in the area; responding to hazards, including: suspended loads and pinch points; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0655 **OPERATE LIFTING MECHANISM(S)** (cont.)

U0655.04 Select slinging equipment, including: size and type of wire rope, nylon slings and chains, shackles, hooks and/or tag lines, pulling plugs, weight indication devices, by determining size/shape/weight of load, site conditions; using PPE; and inspecting attachment/anchor points according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0655.05 Raise and lower materials/equipment using lifting mechanism(s), including: main hoist, hydraulic cylinder, wire line hoist, winches, chain hoists, chain blocks, block and tackles, and come-alongs, by using PPE; determining load, size of material, and pinch points; raising and lowering materials; ensuring clear path for load travel; loading/unloading materials using predetermined signals; operating audio and/or visual communication systems; observing load limits; controlling load; responding to hazards of suspended loads; ensuring clearances; following shutdown procedures as required; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0655 OPERATE LIFTING MECHANISM(S) (cont.)

U0655.06 Shut down lifting mechanism(s), using PPE, by grounding loads; removing/securing load; removing slinging components; setting brake, shutting off power supply; storing slinging equipment in designated/approved area; protecting equipment; performing post-operational checks; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0656 OPERATE PORTABLE PUMPING EQUIPMENT

GENERAL PERFORMANCE OBJECTIVE

Operate portable pumping equipment, by inspecting the workplace for hazardous and/or potentially hazardous conditions; setting up portable pumping equipment; conducting pre-operational checks on portable pumping equipment; starting up portable pumping equipment; operating portable pumping equipment; monitoring portable pumping equipment operation; shutting down portable pumping equipment; refuelling portable pumping equipment; and performing maintenance and adjustments on portable pumping equipment according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____

Trainee's Name (Print) _____

SKILLS

U0656.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656 OPERATE PORTABLE PUMPING EQUIPMENT (cont.)

U0656.02 Set up portable pumping equipment, including: pumps, water heaters, intake hoses and discharge hoses, by using PPE; identifying location(s) of set-up and route to location(s), using references, including: maps, layouts, charts and/or instructions; and placing equipment at predetermined location(s) according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656.03 Conduct pre-operational checks on portable pumping equipment, using PPE, by checking fuel tank and fluid levels; checking principal components, including: drain plugs, pressure-rated fittings, belts, hoses and spark arrestors; checking exhaust systems, fire extinguishers and spill kit; inspecting pressure relief valve, housing, guards and safety devices; checking heating systems; checking direction of exhaust flow; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656.04 Start up portable pumping equipment, using PPE, by priming the equipment; activating power source; and checking discharge pressure according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656 OPERATE PORTABLE PUMPING EQUIPMENT (cont.)

U0656.05 Operate portable pumping equipment, using PPE, by controlling volume, temperature and direction of flow from discharge lines according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656.06 Monitor portable pumping equipment operation, using PPE, by checking for excessive vibration; listening for unusual noises, including: pressure relief valve operation; checking for leaks and unusual odours; checking lubrication levels and water supply; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656.07 Shut down portable pumping equipment, using PPE, by de-energizing power sources and/ or fuel supply; and draining equipment as required according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656 OPERATE PORTABLE PUMPING EQUIPMENT (cont.)

U0656.08 Refuel portable pumping equipment, using PPE, by monitoring ventilation levels; ensuring refuelling area is free of ignition sources; shutting off equipment; isolating and/or de-energizing energy source; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0656.09 Perform maintenance and adjustments on portable pumping equipment, using PPE, by lubricating equipment and attachments; ensuring guards are in place; maintaining fluid levels; ensuring replacement of worn belts and hoses; locking out and tagging; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0657 RECOVER AND HANDLE CORE

GENERAL PERFORMANCE OBJECTIVE

Recover and handle core, by inspecting the workplace for hazardous and/or potentially hazardous conditions; emptying core tube; placing core in core box(es); preparing core box(es) for transportation; and preparing and maintaining in hole tools according to environmental plan, government legislation, company standards and manufacturer specifications. . *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____ Trainee's Name (Print) _____

SKILLS

U0657.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturers specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0657.02 Empty core tube, using PPE according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0657 RECOVER AND HANDLE CORE (cont.)

U0657.03 Place core in core box(es), using PPE according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0657.04 Prepare core box(es) for transportation, by using PPE; securing box(es); and identifying box(es), including: marking core box (es) with the required information inside and outside and sealing box(es) according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0657.05 Prepare and maintain in hole tools, including: bit, shell, inner/outer tube assembly, water swivel, hoisting plugs and rods, by using PPE; checking components for tolerances, signs of wear/deficiencies and obstructions; removing any obstructions; and lubricating or replacing worn parts according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0658 OPERATE SKIDDER

GENERAL PERFORMANCE OBJECTIVE

Operate skidder, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on skidder; starting up skidder; conducting operational checks on skidder; operating skidder to move equipment/product/material; shutting down skidder; refuelling skidder and performing maintenance and adjustments on skidder according to environmental plan, government legislation, company standards and manufacturer specifications.
Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0658.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658 **OPERATE SKIDDER** (cont.)

U0658.02 Perform pre-operational checks on skidder, using PPE, by checking power source; checking fluid levels; inspecting principal components, including: steps and handrails, canopy/cab, chassis, winch and winch cable, blade and attachments, engine/power source, power train, hydraulic cylinders and systems, controls, wheel chocks; following refueling and lubricating procedures; checking lighting, warning and communication systems; visually inspecting fire extinguishers and/or fire suppression systems, pins/seals and nozzles; checking exhaust systems and spark arrestors; inspecting tires/chains and wheel assemblies; inspecting braking system; using 3 point contact while mounting and dismounting skidder; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658.03 Start up skidder, using PPE, by activating power source; using warning systems; monitoring equipment operation, gauges and load limits; checking for clearances and activity in area; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658 **OPERATE SKIDDER** (cont.)

U0658.04 Conduct operational checks on skidder, using PPE, by monitoring gauges and meters, including: oil and air pressure, lights and warning systems, winch and winch cables, blades and attachments, temperature, alternator output, transmission and torque pressure; listening for unusual noises in engine/power train; inspecting steering; testing brakes; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658.05 Operate skidder to move equipment/product/material, by using PPE; following designated travel route(s); observing speed limits; selecting gear and adjusting speed to route conditions; positioning vehicle and attachments, including: winch, blades and/or attachments; observing signals and traffic procedures; operating on grades/uneven driving surfaces according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658 **OPERATE SKIDDER** (cont.)

U0658.06 Shut down skidder, by using PPE; positioning vehicle in designated/ approved area; setting park brake; lowering blade and/or attachments to the ground; grounding/blocking suspended loads; shutting off power; applying wheel chocks; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658.07 Refuel skidder, using PPE, by monitoring ventilation; shutting off engine; ensuring refuelling area is free of ignition sources; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0658.08 Perform maintenance and adjustments on skidder, using PPE, by lubricating equipment and attachments; maintaining fluid levels; ensuring replacement of belts hoses, and winch cables; completing maintenance and/or deficiency report; and locking out and tagging according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

	Employer's Name	Employer's Signature
	_____	_____

U0659 OPERATE TRACK VEHICLE

GENERAL PERFORMANCE OBJECTIVE

Operate track vehicle, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on track vehicle; starting up track vehicle; conducting operational checks on track vehicle; operating track vehicle to move equipment/product/material; shutting down track vehicle; refuelling track vehicle; and performing maintenance and adjustments on track vehicle according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0659.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659 OPERATE TRACK VEHICLE (cont.)

U0659.02 Perform pre-operational checks on track vehicle, using PPE, by checking power source; checking fluid levels; inspecting principal components, including: steps and handrails, canopy/cab, escape hatch, chassis, winch and winch cable, blade and attachments, engine/power source, power train, hydraulic cylinders and systems, controls; checking lighting, warning and communication systems; visually inspecting fire extinguishers and/or fire suppression systems; checking pins/seals and nozzles; following refueling and lubricating procedures; checking exhaust systems and spark arrestors; inspecting track, sprockets and rollers; inspecting braking system; using 3 point contact while mounting and dismounting track vehicle; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659.03 Start up track vehicle, using PPE, by activating power source; using warning systems; monitoring equipment operation, gauges and load limits; checking for clearances and activity in area; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659 OPERATE TRACK VEHICLE (cont.)

U0659.04 Conduct operational checks on track vehicle, using PPE, by monitoring gauges and meters, including: oil and air pressure, lights and warning systems, winch and winch cables, blade and attachments, temperature, alternator output, transmission and torque pressure; listening for unusual noises in engine/power train; inspecting steering; testing brakes; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659.05 Operate track vehicle to move equipment/product/material, by using PPE; following designated travel route; observing speed limits; selecting gear and adjusting speed to route conditions; positioning vehicle, including: winch, blade and/or attachments; observing signals and traffic procedures; and operating on grades/uneven driving surfaces according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659.06 Shut down track vehicle, using PPE, by positioning vehicle in designated/approved area; setting park brake; lowering blade and/or attachments to the ground; grounding/blocking suspended loads; shutting off power; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659 **OPERATE TRACK VEHICLE** (cont.)

U0659.07 *Refuel track vehicle, using PPE, by monitoring ventilation; shutting off engine;* ensuring refuelling area is free of ignition sources; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0659.08 Perform maintenance and adjustments on track vehicle, using PPE, by lubricating equipment and attachments; inspecting and adjusting tracks; maintaining fluid levels; ensuring replacement of belts and hoses, winch cables; completing maintenance and/or deficiency report; and locking out and tagging according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0660 OPERATE SNOW MOBILE

GENERAL PERFORMANCE OBJECTIVE

Operate snow mobile, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on snow mobile; starting up snow mobile; conducting operational checks on snow mobile; operating snow mobile to move personnel/equipment/product/material; shutting down snow mobile; refuelling snow mobile; and performing maintenance and adjustments on snow mobile according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0660.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660 OPERATE SNOW MOBILE (cont.)

U0660.02 Perform pre-operational checks on snow mobile, using PPE, by checking power source; checking fluid levels; following refueling and lubricating procedures; inspecting principal components, including: running boards and hand holds, engine, power train, throttle, and controls; checking lighting, warning and communication systems; inspecting track, skis, drive belt and guard, sprockets and rollers and emergency supplies; inspecting braking system; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660.03 Start up snow mobile, by activating power source; using PPE; using warning systems; monitoring equipment operation, gauges and load limits; checking for clearances and activity in area; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660 **OPERATE SNOW MOBILE** (cont.)

U0660.04 Conduct operational checks on snow mobile, using PPE, by monitoring gauges and meters, including: oil, lights, temperature and warning systems; listening for unusual noises in engine/power train; inspecting steering; testing brakes; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660.05 Operate snow mobile to move personnel/equipment/product/material, by using PPE, including: helmet, gloves and boots; following designated travel route; observing speed limits; selecting gear and adjusting speed to route conditions; observing signals and traffic procedures; operating on grades/uneven driving surfaces according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660 **OPERATE SNOW MOBILE** (cont.)

U0660.06 Shut down snow mobile, using PPE, by positioning vehicle in designated/approved area; setting park brake; shutting off power; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660.07 Refuel snow mobile, using PPE, by monitoring ventilation; shutting off engine; ensuring refuelling area is free of ignition sources; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0660 **OPERATE SNOW MOBILE** (cont.)

U0660.08 Perform maintenance and adjustments on snow mobile, using PPE, by lubricating equipment; maintaining fluid levels; ensuring replacement of belts and hoses; completing maintenance and/or deficiency report; and locking out and tagging according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0661 OPERATE ALL –TERRAIN VEHICLE

GENERAL PERFORMANCE OBJECTIVE

Operate all-terrain vehicle, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on all-terrain vehicle; starting up all-terrain vehicle; conducting operational checks on all-terrain vehicle; operating all-terrain vehicle to move personnel/equipment/product/material; shutting down all-terrain vehicle; refuelling all-terrain vehicle; and performing maintenance and adjustments on all-terrain vehicle according to environmental plan, government legislation, company standards and manufacturer specifications. *Notes: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0661.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661 **OPERATE ALL –TERRAIN VEHICLE** (cont.)

U0661.02 Perform pre-operational checks on all-terrain vehicle, using PPE, by checking power source; checking fluid levels; following refuelling and lubricating procedures; inspecting principal components, including: attachments and/or towing devices, steps and hand holds, engine, power train, throttle and controls; checking lighting, warning and communication systems; inspecting wheels and wheel assemblies, wheel chocks, drive belt and guard, sprockets and rollers, safety chain. winch and winch cable and emergency supplies; inspecting braking system; using 3 point contact while mounting and dismounting all-terrain vehicle; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661.03 Start up all-terrain vehicle, using PPE, by activating power source; using warning systems; monitoring equipment operation, gauges and load limits; checking for clearances and activity in area; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661 OPERATE ALL –TERRAIN VEHICLE (cont.)

U0661.04 Conduct operational checks on all-terrain vehicle, using PPE, by monitoring gauges and meters, including: oil, lights, temperature and warning systems; listening for unusual noises in engine/power train; inspecting steering; testing brakes; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661.05 Operate all-terrain vehicle to move personnel/ equipment/product/material, using PPE, including: helmet, gloves and boots, by following designated travel route; observing speed limits; selecting gear and adjusting speed to route conditions;; observing signals and traffic procedures; and operating on grades/uneven driving surfaces according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661.06 Shut down all-terrain vehicle, by using PPE; positioning vehicle in designated/approved area; setting park brake/wheel chocks; shutting off power; locking out and tagging; repairing and/or reporting deficiencies; and filling out operator report according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661 **OPERATE ALL –TERRAIN VEHICLE** (cont.)

U0661.07 Refuel all-terrain vehicle, using PPE, by monitoring ventilation; shutting off engine; allowing engine to cool; ensuring refuelling area is free of ignition sources; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0661.08 Perform maintenance and adjustments on all-terrain vehicle, using PPE, by lubricating equipment; maintaining fluid levels; ensuring replacement of belts and hoses; completing maintenance and/or deficiency report; and locking out and tagging according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0662 OPERATE PORTABLE GENERATOR

GENERAL PERFORMANCE OBJECTIVE

Operate portable generator, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on portable generator; operating portable generator under no load conditions; conducting operational checks on portable generator under load; shutting down portable generator; refuelling portable generator; and performing maintenance and adjustments on portable generator according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0662.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0662 **OPERATE PORTABLE GENERATOR** (cont.)

U0662.02 Perform pre-operational checks on portable generator, using PPE, by checking fuel tank levels and lubricant levels; checking fire extinguisher(s), exhaust systems and spark arrestors; setting up equipment and ensuring it is secure and on an even base; checking wires and grounding; checking belt and hoses; checking direction of exhaust flow; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0662.03 Operate portable generator under no load conditions, by using PPE; monitoring ventilation levels; and starting up engine according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0662.04 Conduct operational checks on portable generator under load, by using PPE; switching on breaker/disconnect; listening for unusual noises; checking for unusual smells; visually checking wiring and grounding; checking for vibrations; monitoring generator gauges; ensuring lubricants and fluids are at required levels; checking direction of exhaust flow; monitoring ventilation levels; repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0662 **OPERATE PORTABLE GENERATOR** (cont.)

U0662.05 Shut down portable generator, using PPE, by ensuring breaker/disconnect is switched off; and shutting off engine and/or fuel supply according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0662.06 Refuel portable generator, using PPE, by monitoring ventilation; shutting off engine; ensuring refuelling area is free of ignition sources; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0662.07 Perform maintenance and adjustments on portable generator, using PPE, by lubricating equipment; maintaining fluid levels; ensuring replacement of belts and hoses; completing maintenance and/or deficiency report; and locking out and tagging according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

	Employer's Name	Employer's Signature
	_____	_____

U0664 LOAD AND UNLOAD PERSONNEL AND EQUIPMENT FROM HELICOPTER

GENERAL PERFORMANCE OBJECTIVE

Load and unload personnel and equipment from helicopter, by reading layout prior to commencement of work; inspecting the workplace for hazardous and/or potentially hazardous conditions; working around helicopter; planning helicopter move of equipment and supplies to designated sites; preparing and maintaining work sites; preparing/securing loads for transport; attaching load to helicopter for slinging; and receiving load from helicopter according to environmental plan, government legislation, company standards and manufacturer specifications. *Notes: 1. To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, U0670 and U0665.*

PERFORMANCE OBJECTIVES

	Trainer's Name (Print)	Trainee's Name (Print)
	_____	_____

SKILLS

U0664.01 Read layout prior to commencement of work, to be familiar with hole location(s) and job site environment, including: access route, water source, and safety hazards according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664 LOAD AND UNLOAD PERSONNEL AND EQUIPMENT FROM HELICOPTER (cont.)

U0664.02 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: ground conditions, poor housekeeping, open holes, inadequate ventilation, weather conditions, lake, ice conditions/thickness, forest conditions, snow loads, pressure cracks, by using PPE; isolating area; ensuring safe working conditions; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664.03 Work around helicopter, using PPE, by complying with helicopter company procedures, including: approaching helicopter, embarking and disembarking from helicopter, loading and unloading helicopter and slinging materials/equipment under helicopter; using required signal/communication systems; maintaining safe work distances; and maintaining good housekeeping according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664.04 Plan helicopter move of equipment and supplies to designated sites, including: drill pad, helipad, water source and camp site, by complying with helicopter company procedures; and identifying and responding to workplace hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664 **LOAD AND UNLOAD PERSONNEL AND EQUIPMENT FROM HELICOPTER** (cont.)

U0664.05 Prepare and maintain work sites, using PPE, by complying with helicopter company procedures for clearing site; constructing pads; and keeping site clear of debris and/or loose articles/materials according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664.06 Prepare/secure loads for transport, by using PPE; using rated slinging equipment, including: cables, slings, straps, nets, clevises and hooks; visually inspecting slinging equipment for defects, kinks and required load ratings; attaching tag lines if applicable; securing slinging equipment to lifting points; and complying with helicopter company procedures to ensure drill, equipment and supplies are transported in a safe and efficient manner according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664.07 Attach load to helicopter for slinging, by using PPE; securing equipment and material to main line; communicating clearance to pilot to ensure safe lifting and movement; using hand or radio signals from a safe location; and complying with helicopter company procedures according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0664 LOAD AND UNLOAD PERSONNEL AND EQUIPMENT FROM HELICOPTER (cont.)

U0664.08 Receive load from helicopter, by using PPE; ensuring area is clear and safe; guiding material being lowered to the designated site; communicating instructions to pilot to ensure safe lowering and release of load; using hand or radio signals from a safe location; and complying with helicopter company procedures according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0671 OPERATE WATER CRAFT

GENERAL PERFORMANCE OBJECTIVE

Operate water craft, by inspecting the workplace for hazardous and/or potentially hazardous conditions; performing pre-operational checks on water craft; starting up water craft; conducting operational checks on water craft; operating water craft to move personnel/equipment/product/material; shutting down water craft; refuelling water craft; and performing maintenance and adjustments on water craft according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0671.01 Inspect the workplace for hazardous and/or potentially hazardous conditions, including: unauthorized personnel and/or equipment, by using personal protective equipment (PPE); and removing and/or guarding hazards and/or potential hazards according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671 **OPERATE WATER CRAFT** (cont.)

U0671.02 Perform pre-operational checks on water craft, using PPE, by checking power source; checking fluid levels and leaks; following refueling and lubricating procedures; inspecting principal components, including: engine, propeller, throttle, controls, ventilation blower fan, safety kit, steps and hand holds; checking lighting, warning and communication systems; inspecting, emergency supplies, personal flotation devices, oars and/or paddles, bilge pump, bailing buckets and anchor; using 3 point contact when embarking and disembarking from water craft; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671.03 Start up water craft, using PPE, by placing craft in neutral position and activating power source; monitoring equipment operation, gauges and load limits; checking for clearances and activity in area; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671 **OPERATE WATER CRAFT** (cont.)

U0671.04 Conduct operational checks on water craft, using PPE, by monitoring gauges and meters, including: oil, lights, temperature and warning systems; checking principal components, including: throttle, gear shifter, emergency shut off, on-off switch, and tether switch; listening for unusual noises in engine/power train; inspecting steering; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671.05 Operate water craft to move personnel/equipment/product/material, by using PPE, including: personal flotation devices; securing equipment/product/material; observing load limits; following designated travel route; observing weather conditions; monitoring marine reports; observing speed limits; adjusting speed to water conditions; and following signals and boating procedures according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671.06 Shut down water craft, by using PPE; positioning water craft in designated/approved area; shutting off power; securing water craft; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671 **OPERATE WATER CRAFT** (cont.)

U0671.07 Refuel water craft, using PPE, by monitoring ventilation; shutting off engine; ensuring refuelling area is free of ignition sources; using approved fuel containers; preventing spills or damage to the environment; and cleaning up spills according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0671.08 Perform maintenance and adjustments on water craft, using PPE, by lubricating equipment; maintaining fluid levels; inspecting hoses; completing maintenance and/or deficiency report; and locking out and tagging according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0672 GROUT DIAMOND DRILL HOLES

GENERAL PERFORMANCE OBJECTIVES

Grout diamond drill holes, by identifying and responding to workplace hazards; inspecting workplace and travel ways; reading daily report/logbook; selecting grouting equipment; performing pre-operational checks on grouting equipment; starting up grouting equipment; conducting operational checks on grouting equipment; performing grouting; maintaining grouting equipment; and tearing down and storing grouting equipment according to environmental plan, government legislation, company standards and manufacturer specifications.
Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.

PERFORMANCE OBJECTIVE

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0672.01 Identify and respond to workplace hazards, including: water, weather, ground/ ice conditions, inadequate ventilation, poor housekeeping, by using personal protective equipment (PPE); isolating area to ensure safe working conditions; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672 **GROUT DIAMOND DRILL HOLES** (cont.)

U0672.02 Inspect workplace and travel ways, by using PPE; ensuring floors are free of debris, including: ice, drilling muds, grease and oils; clearing obstructions; observing weather, ground and ice conditions, including: snow, rain, thunder storms and fog; picking up debris; following good housekeeping practises; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672.03 Read daily report/logbook, prior to commencement of work to be familiar with hole location(s), hole specifications, job site, environment and safety hazards according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672.04 Select grouting equipment, including: pump, pressure rated hoses, plugs, mixing equipment, grout type, additives, by reading daily report/logbook and/or following procedures; and using PPE according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672 **GROUT DIAMOND DRILL HOLES** (cont.)

U0672.05 Perform pre-operational checks on grouting equipment with controls in neutral position, by using PPE; checking power source; inspecting pumps; checking fluid levels and pressure rated hoses; lubricating grease fittings; inspecting gauges and principal components, including: guards and controls; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672.06 Start up grouting equipment, using PPE, by activating power source; monitoring equipment and gauges; checking for clearances and activity in area; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672.07 Conduct operational checks on grouting equipment, using PPE, by monitoring gauges and meters, including: oil, pump pressure, and system pressure; listening for unusual noises; checking hoses; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672 **GROUT DIAMOND DRILL HOLES** (cont.)

U0672.08 Perform grouting, using PPE, by preparing grout mixture, including: cement, chemicals, water and/or additives; mixing to prescribed consistency; installing grout plugs when required; pumping grout mixture into the hole as specified; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672.09 Maintain grouting equipment, using PPE, by flushing grouting system; checking controls, lubrication, and general condition of pump; checking mixing tank, hoses and gauges for worn/defective components; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0672 **GROUT DIAMOND DRILL HOLES** (cont.)

U0672.10 Tear down and store grouting equipment, by using PPE; de-activating power sources; disconnecting hydraulic hoses and grout hoses; performing post-operational checks; storing equipment in designated/approved area; locking out and tagging; repairing and/or reporting deficiencies; and completing reports according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

	Employer's Name	Employer's Signature
	_____	_____

U0673 READ AND INTERPRET LAYOUT(S)/DRILL HOLE PLAN

GENERAL PERFORMANCE OBJECTIVE

Read and interpret layout(s)/drill hole plan, by interpreting standard symbols, plans, grid line(s) and construction drawings; using layout(s)/drill hole plan, measuring and reference devices; communicating the current status of layout/drill hole plan information to co-workers and others as required; verifying drilling specifications; and identifying and responding to safety notices according environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, and U0670.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____ Trainee's Name (Print) _____

SKILLS

U0673.01 Interpret standard symbols, plans, grid line(s) and construction drawings, to ensure work progresses in a safe manner according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0673 **READ AND INTERPRET LAYOUT(S) /DRILL HOLE PLAN** (cont.)

U0673.02 Use layout(s)/drill hole plan, measuring and reference devices, to verify work is progressing according to plans and specifications, including: topographic maps, Global Positioning System (GPS), scales, lasers, tapes, plumb lines, protractors, levels and rulers and follow reporting procedures according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0673.03 Communicate the current status of layout/drill hole plan information to co-workers and others as required, including: workers, engineers/geologists and supervisors to keep them informed of the current status of drilling production work and follow reporting procedures according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0673.04 Verify drilling specifications, including: hole location, depth, size, azimuth and inclination according to layout and follow reporting procedures according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0673 **READ AND INTERPRET LAYOUT(S)/DRILL HOLE PLAN** (cont.)

U0673.05 Identify and respond to safety notices, including: hazardous gases, breakthroughs, remote drilling areas, geological structures, high water pressure and flow, by using PPE; following procedures/practices, including: guarding, and communicating and monitoring according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

	Employer's Name	Employer's Signature
	_____	_____

U0665 **PERFORM SURFACE DIAMOND DRILLING - GENERAL**

GENERAL PERFORMANCE OBJECTIVES

Perform surface diamond drilling - general, by identifying and responding to workplace hazards; inspecting workplace and travel ways; planning transport of equipment/material/supplies to the next drill site/location; determining method for transporting equipment/material/supplies; securing loads for transport of drill and equipment; planning and organizing drill site; setting up drill; installing safety devices; setting up safety barriers; reading/maintaining daily drill report/log book before operating drill; performing pre-operational checks on drill with controls in neutral position; starting up drill; conducting operational checks on drill; drilling hole to predetermined depth; checking for the presence of hazardous gases; shutting down drill; maintaining drilling equipment; and tearing down drill equipment according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this runner module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, U0670, U0654, U0655, U0656, U0657and one of U0658 or U0659.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print)	Trainee's Name (Print)
_____	_____

SKILLS

U0665.01 Identify and respond to workplace hazards, including: ground conditions, poor housekeeping, open holes, inadequate ventilation, weather conditions, lake, ice conditions/thickness, forest conditions, snow loads, pressure cracks, by using personal protective equipment (PPE); isolating area; ensuring safe working conditions; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 **PERFORM SURFACE DIAMOND DRILLING – GENERAL** (cont.)

U0665.02 Inspect workplace and travel ways, by using PPE; ensuring floors are free of debris, including: ice/drilling muds/grease/oils; clearing obstructions; observing weather conditions, including: snow, rain, thunder storms and fog; picking up debris; monitoring ground conditions; following good housekeeping practises; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.03 Plan transport of equipment/materials/supplies to the next drill site/location, prior to mobilizing equipment, by identifying route using maps/instructions; using PPE; and identifying and responding to workplace hazards, including: ground conditions and weather according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.04 Determine method for transporting equipment/materials/supplies, by selecting moving equipment type, including: skidder, track vehicle, and helicopter; using PPE; and using communication devices according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 PERFORM SURFACE DIAMOND DRILLING – GENERAL (cont.)

U0665.05 Secure loads for transport of drill and equipment, using PPE; and using approved methods and equipment, including: rated chains, load binders, slings and clevises according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.06 Plan and organize drill site, by scheduling delivery of equipment, including: rod sloop, pump shack, fuel tank, container, core boxes, and hose; using PPE; and planning location/position of drill and other related equipment according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.07 Set up drill, using PPE, by adhering to layout/log book/instructions; following approved methods, including: installing cribbing, mast/tower supports, walkways, steps and connecting hosing, basket and guy/guidewires; ensuring required azimuth and inclination; and lining up and levelling equipment; according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 **PERFORM DIAMOND DRILLING SURFACE - GENERAL** (cont.)

U0665.08 Install safety devices, including: fire extinguishers, seasonal fire fighting equipment, emergency response equipment, spill kits, guy/guidewires, communication devices, fall protection, hazardous gas tester, barricade/signs guards and guard rails, by using PPE; identifying and locating devices; following installation procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.09 Set up safety barriers, by using PPE; placing guards, including: fencing, signage, chains and warning devices; using communication means/devices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.10 Read/maintain daily drill report/log book before operating drill, to take corrective actions for hazards/discrepancies at the drill site or abnormalities in the drill hole, including: drill misalignment, damaged bits, broken rods, and shell, core barrel and hole deviation, by ensuring that information regarding drill and drill hole are documented for the oncoming operator according to environmental plan, government legislation and company standards.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 **PERFORM DIAMOND DRILLING SURFACE - GENERAL** (cont.)

U0665.11 Perform pre-operational checks on drill with controls in neutral position, by using PPE; checking power source, fluid levels and drip pans; lubricating grease fittings; inspecting spill kit, gauges, and principal components, including: pumps, sludge recovery systems, lifting/hoisting devices, rod handling devices, exhaust systems, spark arrestors, safety devices, ladders, steps, hand rails, machine guards, rod rack, controls, and emergency shut-down; checking lighting and electrical wiring; checking communications systems, fire extinguishers and/or fire suppression systems, pins, nozzles and seals; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.12 Start up drill, with controls in neutral position, by using PPE; activating the power source(s); monitoring gauges and meters, including: fluid levels, voltage, amperage and water pressure, temperature, system pressure; checking lights and electrical wiring; listening for unusual noises; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 **PERFORM DIAMOND DRILLING SURFACE - GENERAL** (cont.)

U0665.13 Conduct operational checks on drill, using PPE, by monitoring gauges and meters, including: fluid levels and water pressure, temperature, system pressure; listening for unusual noises; checking lights and electrical wiring; checking for exhaust leaks; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.14 Drill hole to predetermined depth, using PPE, by collaring hole; using core barrel assemblies; handling rods; retrieving inner tube; identifying hole conditions; monitoring pressures; completing hole and following other diamond drilling processes, including: installing casing, conducting hole testing, introducing additives; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.15 Check for the presence of hazardous gases, including: methane, carbon monoxide and hydrogen sulphide, by using PPE; monitoring the workplace, using sense of smell, hearing and sight and meters as required; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 **PERFORM DIAMOND DRILLING SURFACE - GENERAL** (cont.)

U0665.16 Shut down drill, by using PPE; de-activating power sources; performing post operational checks; completing operator report/drill report/log book; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665.17 Maintain drilling equipment, by using PPE; lubricating and checking components, including: hoist(s), pumps, engine and power train, drill head, rod handling devices, guards, bearings, level wind, cable(s), clamps, guy/guidewires, brake bands, sheave wheels and pulleys according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0665 **PERFORM DIAMOND DRILLING SURFACE - GENERAL** (cont.)

U0665.18 Tear down drill equipment, in preparation for move, using PPE, by performing tasks, including: lowering mast/tower, draining water pumps and packing gear; following good housekeeping practices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0666 PERFORM SURFACE DIAMOND DRILLING - ICE

GENERAL PERFORMANCE OBJECTIVES

Perform surface diamond drilling - ice, by identifying and responding to workplace hazards; inspecting workplace and travel ways; planning transport of equipment/material/supplies to next drill site/location; determining method for transporting equipment/material/supplies; securing loads for transport of drill and equipment; planning and organizing drill site/workplace; setting up drill; installing safety devices; setting up safety barriers; reading/maintaining daily drill report/log book before operating drill; performing pre-operational checks on drill; starting up drill; conducting operational checks on drill; drilling hole to predetermined depth; checking for the presence of hazardous gases; shutting down drill; maintaining drilling equipment; and tearing down drill equipment according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this runner module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, U0670, U0654, U0655, U0656, U0657, one of U0658 or U0659 and U0665.*

PERFORMANCE OBJECTIVES

	Trainer's Name (Print)	Trainee's Name (Print)
	_____	_____

SKILLS

U0666.01 Identify and respond to workplace hazards, including: ground conditions, poor housekeeping, open holes, inadequate ventilation, weather conditions, lake, ice conditions/thickness, forest conditions, snow loads, pressure cracks, by using personal protective equipment (PPE); isolating area; ensuring safe working conditions; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 PERFORM SURFACE DIAMOND DRILLING – ICE (cont.)

U0666.02 Inspect workplace and travel ways, by using PPE; ensuring floors are free of debris, including: ice/drilling muds/grease/oils; clearing obstructions; observing weather conditions, extreme weather variations and snow loads, including: snow, rain, thunder storms and fog; picking up debris; ensuring required ice conditions/thickness; following good housekeeping practises; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications .

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.03 Plan transport of equipment/materials/supplies to next drill site/location, prior to mobilizing equipment, by identifying route, using maps/instructions; using PPE; and identifying and responding to workplace hazards, including: ice conditions/thickness and weather according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.04 Determine method for transporting equipment/materials/supplies, by selecting moving equipment type, including: skidder, track vehicle and helicopter; using PPE; using communication devices according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 **PERFORM SURFACE DIAMOND DRILLING – ICE** (cont.)

U0666.05 Secure loads for transport of drill and equipment, using PPE; and using approved methods and equipment, including: rated chains, load binders, slings and clevises according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.06 Plan and organize drill site/workplace, by scheduling delivery of equipment, including: rod sloop, pump shack, fuel tank, container, core boxes, hose, and toilet; using PPE and; planning location/position of drill and other related equipment according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.07 Set up drill, using PPE, by adhering layout/log book/instructions; following methods, including: installing cribbing, mast/tower supports, steps, walk ways and water pump and connecting hoses, basket and guy/guidewires; ensuring required azimuth and inclination; and lining up and levelling equipment according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 PERFORM SURFACE DIAMOND DRILLING – ICE (cont.)

U0666.08 Install safety devices, including: fire extinguishers, seasonal fire fighting equipment, emergency response equipment, spill kits, guy/guidewires, communication devices, fall protection, hazardous gas tester, barricade/signs and guards, using PPE, by identifying and locating devices; following installation procedures; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.09 Set up safety barriers, using PPE, by placing guards, including: fencing, signage, chains and warning devices; using communication means/devices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.10 Read/maintain daily drill report/log book before operating drill, to take corrective action for hazards/discrepancies at the drill site or abnormalities in the drill hole, including: drill alignment, damaged bits, broken rods, shell, core barrel and hole deviation, by ensuring information regarding drill and drill hole are documented for the oncoming operator according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 PERFORM SURFACE DIAMOND DRILLING – ICE (cont.)

U0666.11 Perform pre-operational checks on drill, with controls in neutral position, using PPE, by checking power source, fluid levels and drip pans; lubricating grease fittings; inspecting spill kit, gauges, and principal components, including: pumps, sludge recovery systems, lifting/hoisting devices, rod handling devices, exhaust systems, spark arrestors, safety devices, ladders, steps, hand rails, machine guards, rod rack, controls, and emergency shut-down; checking lighting and electrical wiring; checking communication systems, fire extinguishers and/or fire suppression systems, pins, nozzles and seals; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.12 Start up drill, with controls in neutral position, by using PPE; activating the power source(s); monitoring gauges and meters, including: fluid levels, voltage, amperage and water pressure, temperature, and system pressure; checking lights and electrical wiring; listening for unusual noises; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 PERFORM DIAMOND DRILLING SURFACE - ICE (cont.)

U0666.13 Conduct operational checks on drill, using PPE, by monitoring gauges and meters, including: fluid levels and water pressure, temperature, and system pressure; listening for unusual noises; checking lights and electrical wiring; checking for exhaust leaks; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.14 Drill hole to predetermined depth, using PPE, by monitoring ice thickness/conditions, extreme weather variations and snow loading; collaring hole; using core barrel assemblies; handling rods; retrieving inner tube; identifying hole conditions; monitoring pressures; completing hole and following other diamond drilling processes, including: installing casing and/or slings, conducting hole testing and introducing additives; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.15 Check for the presence of hazardous gases, including: methane, carbon monoxide and hydrogen sulphide, using PPE, by monitoring the workplace using the senses of smell, hearing and sight and meters as required; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 **PERFORM SURFACE DIAMOND DRILLING – ICE** (cont.)

U0666.16 Shut down drill, by using PPE; de-activating power sources; performing post operational checks; completing operator report/drill report/log book; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666.17 Maintain drilling equipment, using PPE, by lubricating and checking components, including: hoist(s), pumps, engine and power train, drill head, rod handling devices, guards, bearings, level wind, cable(s), clamps, guy/guidewires, brake bands, sheave wheels and pulleys according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0666 PERFORM SURFACE DIAMOND DRILLING – ICE (cont.)

U0666.18 Tear down drill equipment, in preparation for move, by using PPE; performing tasks, including: lowering mast/tower, draining water pumps, packing gear; following good housekeeping practices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

U0667 PERFORM SURFACE DIAMOND DRILLING - BARGE

GENERAL PERFORMANCE OBJECTIVES

Perform surface diamond drilling - barge, by identifying and responding to workplace hazards; inspecting workplace and travel ways; planning transport of equipment/material/supplies to next drill site/location; determining method for transporting equipment/material/supplies; securing loads for transport on drill/service barge; setting up drill; installing safety devices; setting up safety barriers; reading/maintaining daily drill report/log book; performing pre-operational checks on drill; starting up drill; conducting operational checks on drill; drilling hole to predetermined depth; checking for the presence of hazardous gases; shutting down drill; maintaining drilling equipment; and tearing down drill equipment according to environmental plan, government legislation, company standards and manufacturer specifications. *Note: To be trained and accredited in this runner module, the prerequisites from Program #770200 are U0669, U0652, U0653, U0668, U0670, U0654, U0655, U0656, U0657, one of U0658 or U0659 and U0665.*

PERFORMANCE OBJECTIVES

Trainer's Name (Print) _____ Trainee's Name (Print) _____

SKILLS

U0667.01 Identify and respond to workplace hazards, including: ground conditions, poor housekeeping, open holes, inadequate ventilation, weather conditions, lake, ice condition/thickness, forest conditions, snow loads, pressure cracks, by using personal protective equipment (PPE); isolating area; ensuring safe working conditions; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed _____ Trainer's Signature _____ Trainee's Signature _____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.02 Inspect workplace and travel ways, by using PPE; ensuring floors are free of debris, including: ice/drilling muds/grease/oils; clearing obstructions; observing weather conditions, including: snow, rain, thunder storms and fog; picking up debris; following good housekeeping practices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.03 Plan transport of equipment/materials/supplies to the next drill site/location, prior to mobilizing equipment, by identifying route, using maps/instructions; using PPE; and identifying and responding to workplace hazards, including: water depth, marine conditions and weather according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.04 Determine method for transporting equipment/materials/supplies, by selecting equipment type, including: tugboat, service barge, watercraft and helicopter; using PPE; using communication means/devices; and ensuring safety of self and others according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.05 Secure loads for transport on drill/service barge, using PPE; and using approved methods and equipment, including: rated chains, load binders, slings and clevises according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.06 Set up drill, including: stabilizer legs, anchors, mast/tower supports basket and guy/guidewires, by using PPE; adhering to layout/ log book/instructions; lining up and levelling components; ensuring required azimuth and inclination; and ensuring safety of self and others according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.07 Install safety devices, including: fire extinguishers, emergency response equipment, environmental spill prevention, spill kits, floatation devices, guy/guidewires, communication devices, fall protection, hazardous gas tester, barricade/signs and guards, by using PPE; identifying and locating devices; following installation procedures; ensuring safety of self and others; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.08 Set up safety barriers, using PPE, by placing guards, including: guardrails, signage, chains and warning devices; using communication means/devices; repairing and/or reporting deficiencies; and ensuring safety of self and others according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.09 Read/maintain daily drill report/log book, before operating drill, by taking corrective action for hazards/discrepancies at the drill site or abnormalities in the drill hole, including: damaged bits, broken rods, shell, core barrel and hole deviation, by ensuring that information regarding drill and drill hole are documented for the oncoming operator according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.10 Perform pre-operational checks on drill, with controls in neutral position, by using PPE; checking barge/service barge. barge stabilization/anchors, personal safety floatation devices, power source; checking bilge pumps, fluid levels, and drip pans; lubricating grease fittings; inspecting spill kit, gauges; checking principal components, including: pumps, exhaust systems, spark arrestors, steps, hand rails, machine guards, rod rack, sludge recovery system, lifting/hoisting and rod handling devices, safety devices, ladders, emergency shut-down, and controls; checking lighting and electrical wiring; checking communications systems, fire extinguishers and/or fire suppression systems, pins, nozzles and seals; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.11 Start up drill, with controls in neutral position, by using PPE; activating the power source(s); checking gauges and meters, including: fluid levels, voltage, amperage and water pressure, temperature, system pressure; checking lights and electrical wiring; listening for unusual noises; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.12 Conduct operational checks on drill, using PPE, by monitoring gauges and meters, including: fluid levels and water pressure, temperature, and system pressure; listening for unusual noises, checking lights and electrical wiring: checking for exhaust leaks; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.13 Drill hole to predetermined depth, using PPE, by monitoring barge stabilization/anchors, marine conditions and weather conditions; collaring hole; using core barrel assemblies; handling rods; retrieving inner tube; identifying hole conditions; monitoring pressures; completing hole and following other diamond drilling processes, including: installing casing and/or slings, conducting hole testing and introducing additives; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.14 Check for the presence of hazardous gases, including: methane, carbon monoxide and hydrogen sulphide, by using PPE; monitoring workplace using the sense of smell, hearing and sight and meters as required; ensuring safety of self and others according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.15 Shut down drill, by using PPE; de-activating power sources; performing post operational checks; completing operator report/drill report/log book; locking out and tagging; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667.16 Maintain drilling equipment, by using PPE; lubricating and checking components, including: hoist(s), pumps, engine and power train, drill head, rod handling devices, guards, bearings, level wind, cable(s), clamps, guy/guidewires, brake bands, sheave wheels and pulleys according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

U0667 **PERFORM SURFACE DIAMOND DRILLING – BARGE** (cont.)

U0667.17 Tear down drill equipment, in preparation for move, by using PPE; performing tasks, including: lowering mast/tower, draining water pumps and packing gear; following good housekeeping practices; and repairing and/or reporting deficiencies according to environmental plan, government legislation, company standards and manufacturer specifications.

Date Completed	Trainer's Signature	Trainee's Signature
_____	_____	_____

Employer's Name	Employer's Signature
_____	_____

GLOSSARY OF MINING TERMS

ARCH or ARCHING:	The phenomenon whereby electricity jumps through the insulating space between an electrical wire/source to a conducting object such as mobile equipment or a drill tower. The higher the voltage, the more likely it is for an arc to occur.
AZIMUTH:	Direction of a horizontal line as measured on an imaginary horizontal circle. The horizontal direction is reckoned clockwise from the meridian plane of the observer, expressed as the angular distance between the vertical plane passing through the point of observation and the poles of the Earth and the vertical plane passing through the observer and the object under observation.
BACKFILL:	Material excavated from a site and reused for filling.
BACK SIGHT:	A sight or bearing on established survey points from which the drill is aligned to ensure the collar is started in the correct location.
BALLAST:	Gravel, broken stone, expanded slag, or similar material used as a foundation for roads.
BARRICADE:	The process of building a set of barriers to isolate a hazard or access to an area.
BASE METALS:	Common non-precious metals, such as zinc, iron, copper, nickel or lead.
BASKET:	A work platform extended from the drill mast/tower used by the helper
BED:	The surface upon which a crib is laid.
BENCH:	A horizontal ledge or step (sometimes called a seam) that forms a single level of operation.

GLOSSARY OF MINING TERMS - cont'd

BERM:	An artificial ridge of earth.
BICYCLE (HEADER):	A large pipe or chamber with several tees or nozzles connected to consuming points or areas in which either water or air is required. A header maintains water pressure and allows water to advance as required. Also see HEADER (BICYCLE).
BIN:	A box or container used for storing tools, supplies or other items.
BIT:	Any device at the lower end of a drill string, used as a cutting tool in drilling a hole; the cutting edge of a drill.
BLAST or BLASTING:	To use explosives or blasting agents to break rock or other material.
BLASTING AGENT:	An explosive material designed to be used in the blasting process.
BLOCK	1. The wedging of core or core fragments or the impaction of cuttings inside a bit or core barrel, which prevents further entry of core into the core barrel, thereby producing a condition wherein drilling must be discontinued and the core barrel pulled and emptied to forestall loss of core through grinding or the serious damage of the bit or core barrel. 2. An obstruction in a drill hole
BOOM:	Physical extension to a piece of equipment.
BOOMING OUT:	Positioning of machinery booms.
BOREHOLE:	Any large diameter bored hole.
BREAK:	To separate core from solid rock at the bottom of a hole by a tensional pull applied to the drill string.

GLOSSARY OF MINING TERMS - cont'd

BREAKTHROUGH:	The point at which a drill bit leaves the rock and enters either a natural or constructed opening.
BROKEN GROUND:	A shattered rock formation or a formation crisscrossed with numerous, closely spaced, uncemented joints and cracks.
BUGGY:	A small wagon, car or truck used to transport heavy materials over short distances.
BULLNOSE BIT:	A non-coring bit having a convex, half-hemispherical-shaped crown or face. Also called wedge bit, wedge reaming bit or wedging bit.
BURLAP:	A strong, tightly woven jute, hemp, or cotton material used as rags.
CACHE:	A storage area for materials and supplies near the drill site
CANOPY/HOOD:	A covering on equipment to protect workers and equipment.
CARGO SLOOP/ ROD SLOOP:	A skid-mounted open container used to store and transport tubing, supplies and materials to the drill site.
CASING:	1. Tubing screwed together and lowered into a hole to prevent entry of loose rock, gas, or liquid into the hole, to prevent loss of circulation and to support the sides of a hole. 2. Tubing inserted into a drill hole to make the hole more stable.
CASING CAP:	A cover screwed onto casing to seal a drill hole.
CATCH PIT/SUMP:	An excavated hole into which all drill return water is directed either for recycling or removal.

GLOSSARY OF MINING TERMS - cont'd

CAVE OR CAVE-IN:	Fragmented rock materials, derived from the sidewalls of a hole that obstruct the hole or hinder the drilling progress.
CHAPS:	Protective pants to be worn when using a chainsaw.
CHARGE:	1. An explosive and a detonator. 2. An explosive, a detonator and a primer that are exploded as a single unit.
CHICOTS:	A hazardous dead or leaning tree that can fall down with a wind or the vibration of heavy equipment.
CHUCK:	The drill component of the diamond drill that holds and rotates the drill rods in the hole.
CLAIM:	An area or portion of land a person has defined by stakes. To hold mineral rights for the claim, it must be reported to the appropriate government office.
CLEAT:	A device attached to boot to give traction on ice.
COLLAR:	The beginning point of a drill hole.
COLLARING:	The process of beginning a hole.
COME-ALONG:	A hand-operated ratchet block-lifting device.
CONTAINER:	An enclosed storage unit mounted on skids to store materials and supplies.
CORE:	Cylindrical-shaped sample of rock recovered by diamond drilling.
CORE BARREL:	A hollow cylinder attached to the drill bit used to recover a core sample of the rock penetrated while drilling.
CORE SHACK:	A roofed and enclosed structure in which core-filled boxes are stored.

GLOSSARY OF MINING TERMS - cont'd

CORE BOXES:	Lidded containers designed to hold core in parallel grooves.
CRIBBING:	The construction of cribs, or timbers laid at right angles to each other to level out the drill or ancillary equipment.
CROSSHEAD:	A part of the drill head rotation.
CROWN:	The portion of the drill bit inset or impregnated with diamonds formed by casting or pressure-moulding and sintering processes.
CROWN PILLAR:	A horizontal plug or neck of rock left above a mined-out area for support.
CUTTINGS:	The particles of rock produced in a hole during the course of drilling. Also called drill cuttings, drillings or sludge.
DEADMAN:	A buried log, concrete structure or object that functions as an anchor.
DESIGNATED TRAVEL ROUTE:	A pre-determined trail or path used to access the drill site and other work areas.
DETONATE:	To cause an explosive agent or mixture to explode.
DETONATOR:	A device used in firing a charge of explosive; includes blasting cap and electric blasting cap.
DEVELOPMENT:	The preparation of a mining property or area so that an ore body can be analyzed and its tonnage and quality estimated. Development is an intermediate stage between exploration and mining.

GLOSSARY OF MINING TERMS - cont'd

DIAMOND DRILL:	A drilling machine with a rotating, hollow, diamond-studded bit that cuts a circular channel around a core, which can be recovered to provide a more or less continuous and complete columnar sample of the rock penetrated.
DIP/INCLINATION:	An angular measurement of the inclination of a hole.
DISKING:	A condition of a drill core sample that indicates an area is under high stress. When the rock sample contains many thin slices or disks, the area is under considerable stress.
DISPLACEMENT:	A term referring to changes from one side of a fracture plane relative to the other side of the plane.
DOLLY:	A wheeled, low-rise platform used in displacing heavy loads.
DRAW BAR:	A device affixed to a drill shack to which towing cables are attached.
DRILL (noun):	1. Any cutting tool that uses energy to produce a circular hole in rock, metal, wood, or other materials. 2. Also see DIAMOND DRILL.
DRILL BIT:	One of a number of cutting tools used to cut circular holes in rock, wood and metal.
DRILL HEAD:	The drill component which houses the chuck.
DRILL HOLE:	A hole bored for exploring strata in search of minerals or for proving the position of old workings and faults.

GLOSSARY OF MINING TERMS - cont'd

DRILL HOLE PLAN:	The scope of the drill program as detailed by the client including: the location, size and depth of holes; the location and distance of water supply; and any other special instructions pertaining to the program.
DRILL REPORT:	A daily record of the shift's activities for operational, invoicing and payroll purposes.
DRILL STRING:	The assemblage in a drill hole, consisting of drill rods, core barrel and bit, or drill rods and bit, that is connected to and rotated by the drill at the collar of the bore hole.
DRUM HOIST:	A large, power-driven cylinder or cone on which a rope is coiled to hoist and lower materials.
DRY:	Driller's change house equipped with a means of storing work wear and drying wet clothing.
DYKE:	A long, relatively thin body of igneous rock.
EMERGENCY PULL CORD/STOP:	A rope or line by which a machine or conveyor can be stopped from a remote location.
EMERGENCY RESPONSE PLAN:	The procedures to be followed in the case of an emergency.
ENVIRONMENTAL PLAN:	A site specific strategy developed to minimize the environmental impact of the drill program.
EXPLORE:	To prospect or search for ore.

GLOSSARY OF MINING TERMS - cont'd

EXPLOSIVES:	A substance that is made, manufactured or used to produce an explosion or detonation. The substances include: gunpowder; propellant powder; dynamite; detonating cord; blasting agent; slurry; water; gel and detonator.
EYEBOLT:	A rod or bolt having a looped or ring-shaped opening at one end.
FACE:	1. The part of a bit in contact with the bottom of a borehole, when drilling is in progress, that cuts the material being drilled, cutting face. 2. The bottom of a drill hole.
FALL-ARREST SYSTEM:	A suitable combination of a belt, a full body harness, a lanyard, an anchor and a rope-grabbing device or lifeline.
FAULTS:	A fracture or fracture zone along which there has been a clearly visible dislocation or displacement of the two sides, relative to each other.
FAULTING:	The moving or shifting which results in the displacement of adjacent rock masses along a break or fracture.
FIRE-HAZARD AREA:	1. An area in which a fire hazard may be created by smoking, matches, or other means of producing heat or fire and that has been designated as such by the supervisor in charge of the mine. 2. A storage area where oil, grease, or flammable liquids in excess of 500 litres are stored.
FIRE-SUPPRESSION SYSTEM:	An installation for the specific purpose of controlling a fire in a particular place or piece of equipment.
FIRING:	The act of detonating an explosive charge.

GLOSSARY OF MINING TERMS - cont'd

FISHING:	Attempting to recover by the use of special tools, a piece or assembly of drilling equipment that has become detached, broken, lost or accidentally dropped in the hole.
FLOOR:	Plank-covered, or steel-mesh-covered, level work area at the base of a drill around the collar of a hole.
FOLDING:	The bending of rock strata that result in geologic structures, such as anticlines, synclines, monoclines and isoclines.
FOOTWALL:	The underside of a vein in relation to the dip of an ore deposit.
FRACTURE:	A clean break or crack in ore or rock.
FRACTURE ZONE:	A mass or area of rock that has many small, irregular fractures.
FRONT SITE:	A sight or bearing on established survey points from which the drill is aligned to ensure the collar is started in the correct location.
GALVANOMETER:	An instrument used to detect small electric current. In electric blasting it is used to determine if there are broken wires or short circuits
GAUGE:	1. The thickness of a thin material e.g. sheet metal or plastic film. 2. The diameter of a slender object e.g. wire. 3. An instrument with a graduated scale or dial for measuring or indicating quantity such as fluid pressure.
GEOPHYSICS TESTING:	The exploration of an area in which geophysical properties and relationships unique to the area are mapped by one or more geophysical methods.

GLOSSARY OF MINING TERMS - cont'd

GLOBAL POSITIONING SYSTEM (GPS):	A satellite-based navigational system permitting the determination of any point on the Earth with high accuracy. GPS is used in mapping, mineral exploration, and GIS data collection providing two- and three-dimensional (latitude, longitude, and elevation) positioning capabilities.
GROUNDING CHAIN:	A sensing device which is used on rubber-tired vehicles to ground shorts and static electricity.
GROUND FAULT SYSTEM:	A sensing device used in electrical circuits that interrupts the power supply when electrical current leaks to ground.
GROUTING:	Pumping cement into a hole to prevent ground water from seeping or flowing to the surface.
GROUT PLUG:	A block installed in the hole prior the grouting to prevent the grout from descending to the bottom of the hole.
GUARD:	A device or attachment installed to a hazardous component to protect workers against injury.
GUY/GUIDEWIRE:	A wire line or rope attached to the top of a drill tower/mast and extending obliquely to the ground, where it is fastened to a deadman or guy anchor.
HEADER (BICYCLE):	A large pipe or chamber with several tees or nozzles connected to consuming points or areas in which either water or air is required. A header maintains water pressure and allows water to advance as required. Also see BICYCLE (HEADER).
HEADFRAME:	The steel, timber or concrete frame that supports the hoisting sheaves over the mineshaft.

GLOSSARY OF MINING TERMS - cont'd

HEADING:	A workplace in an underground mine.
HITCH:	A connection between two pieces of equipment.
HOIST:	The drill component used to handle, pull and lower tubing into the hole.
HOOD:	A covering on equipment to protect workers and equipment.
HUNG LOAD:	Any load of materials that is suspended.
IGNITION SOURCES:	Any heat source that can cause a fire under the right conditions such as an open flame, the sun, hot surfaces, sparks, electrical energy, friction and chemical energy.
JAWS:	The two consumable components of a pipe wrench which come into contact with the tubing when in use. The top component is called the hook and the bottom, the heel. Also called chuck jaws.
JOINTS:	Section of drill string where two ends of tubing screw into each other.
LAGGING:	The surface or contact area of a drum or flat pulley, especially a detachable surface or one of special composition.
LEACH OR LEACHING:	1. The natural process of dissolving minerals from rock or ore by draining liquids downward or allowing them to percolate. 2. Also, leaching is a chemical process used to extract valuable minerals from ore.
LIFELINE(S):	The part in a fall-arrest system that runs from the anchor to the personal safety belt or body harness.

GLOSSARY OF MINING TERMS - cont'd

LIFTER/CORE LIFTER:	A spring clip at the base of the core barrel that grips the core, enabling it to be broken off and brought out of the hole. Other terms include: core clip, core gripper, core spring, ring lifter, split-ring lifter, core breaker, core catcher, spring lifter or spring core lifter.
LOADING POCKET:	An excavated storage area in the shaft where rock is transferred from o.p./w.p. to skip conveyances.
LOAD HAUL DUMP (LHD):	A machine powered by electricity, diesel, or compressed air that loads, hauls, and dumps ore.
LOCKOUT AND TAG:	Safety procedures and devices used to prevent the activating or energizing of equipment.
LOGBOOK:	A book in which the record of events during the shift is entered. Other terms include: journal and journal book.
LOOSE ROCK:	Fragmented or weak rock that needs to be taken down. Also called loose.
LUX:	A unit of measurement by which light intensity is measured.
MAGAZINE:	On surface, a specially constructed room or building used for the storage of explosives. In the underground it is a specially prepared and designated area for storing explosives.
MANWAY:	Any passage normally used for travel from one elevation to another.
MARINE REPORT:	A report describing current and forecasted weather and buoy conditions for the region.

GLOSSARY OF MINING TERMS - cont'd

MAST or TOWER:	A drill derrick mounted on a drill unit, which can be raised to its operating position by mechanical means.
MECHANICAL SCALER:	A machine used to remove loose from an opening, usually by a hammering process.
MICROSEISMIC MONITORING:	Using an electronic device to measure subaudible stress noises or changes that occur in the rock. The readings taken by a microseismic monitor can be used as indicators of rock failure.
MILLHOLE:	An opening for the passage of muck.
MISHOLE:	A drill hole that contains explosives in which all or part of the explosives have failed to detonate.
MUCK (noun):	Rock that has been broken by blasting.
MUCK (verb):	To shovel or load any material.
MUD:	Drill additives used to lubricate the hole.
NIPPING:	It is the movement of material.
OPEN HOLE:	Any unprotected hole through which a person could fall or enter.
OPERATING MINE:	An underground hard rock mine in which production, development, and changing conditions require maintenance and installation of infrastructure, ground control, and ventilation for the extraction of ore. It is where a worker can demonstrate terminal performance objectives as outlined in a specific module for the Hard Rock Miner program.

GLOSSARY OF MINING TERMS - cont'd

OPERATOR REPORT:	A report completed by an operator detailing particulars of hole's depth, conditions of hole, equipment, unsafe conditions etc.
ORE:	Mixtures of minerals and waste rock from which at least one mineral can be mined for profit.
OVERBREAK:	When rock breaks past the design of the blast.
OVERBURDEN:	Loose soil, sand, gravel etc. that lie above the bedrock.
OVERWIND:	The act of hoisting (or winding up) a cage or skip beyond its safe limits.
PERCOLATION:	The process of allowing a liquid to seep through a solid.
PILOT HOLE:	A small-diameter hole used to guide or direct a reamer.
PILLAR:	The engineered support at any opening being excavated in a mine.
PINCH POINTS:	Any point on a machine or piece of equipment where movement may cause pinching.
PLUGGER:	A gas or air powered drill used for anchoring of the drill.
PORTAL:	The surface opening to a shaft, tunnel or adit.
POWDER:	An often used term for explosives or blasting agents.
PREMATURE BLAST:	The detonation of an explosive charge earlier than planned. Also referred to as a premature firing.
PRIMER:	A small charge placed within the main charge to initiate an explosion.
RAMP:	An inclined roadway.

GLOSSARY OF MINING TERMS - cont'd

REAM:	To enlarge the hole or section of hole by re-drilling.
REFUGE STATION:	An underground area that can be sealed off and used by miners as a refuge against fires and their effects. See Regulation 26 of the *Occupational Health and Safety Act.*
ROCKBURST:	A sudden failure of rock.
ROCK MECHANICS:	The study and mathematical analysis of the behaviour of rock, focusing on the forces that affect rock along planes and faults and around excavations.
ROTARY DRILL:	A drill that bores or cuts a hole as the drill bit rotates.
ROTARY PERCUSSION DRILL:	A drill that repeatedly strikes the rock surface as it is boring or cutting a hole.
RUNNING BLOCK:	A movable device in a block-and-tackle system consisting of sheaves, frame, clevis and/or hook used to hoist or lower tubing.
RUN LIGHT:	A light that indicates the operational status of equipment.
RUNNER:	Alternative name for Drill Operator.
SANDBLASTING:	Blasting chunks using a charge set on top of a rock to reduce the size.
SAFETY FUSE:	A prepared cord, made of combustible materials, used to ignite a detonator or an explosive charge.
SCALING:	Checking, conditioning, and removing loose rock from roofs, walls, and faces.
SCALING BAR:	A shaft or rod, with a forged or replaceable tip, that is used to pry loose rock from the face, back and walls.

GLOSSARY OF MINING TERMS - cont'd

SCRUBBER:	An exhaust cleaner on a diesel engine.
SERVICE BARGE:	A flat-bottomed boat used chiefly for the transport of personnel, ancillary equipment, materials and supplies to the drill site.
SHACK:	A skid-mounted, roofed and enclosed structure in which equipment is housed such as the drill shack and pump shack.
SHEAR:	When structural pressures cause a plane to fracture, resulting in the shifting or displacing of one side of the plane in relation to the other side of the plane.
SILICOSIS:	A lung disorder caused by the inhalation of silica or quartz.
SKIDS:	Planks, logs, or beams along which heavy objects can be slid or moved.
SLIMES:	Extremely fine particles of rock suspended in water.
SLINGS:	Rigging or lifting device used to raise or lower objects.
SLOOP:	A skid-mounted open container used to store and transport tubing, supplies and materials at/to the drill site.
SLUDGE:	The fine cuttings and water that come from a hole being drilled.
SLUDGE COLLECTOR:	A device which separates the cuttings from the return water and retains the cuttings for disposal.
SNOW LOAD:	A weight and distribution of snow, especially on an ice surface.
STAGING:	A working platform.

GLOSSARY OF MINING TERMS - cont'd

STATION OR SHAFT STATION:	An area of the shaft that has been enlarged so it can be used as a landing for the cage. All mining levels will have a landing.
STENCH GAS:	A substance with a distinctive, disagreeable odour, similar to rotten eggs, put into the ventilation and compressed-air systems to warn underground workers of fire or other emergencies.
STOCKPILE:	An accumulation or reserve pile of broken ore.
STRESS:	A load or force (mathematically calculated or measured) that is producing a strain on rock, wood, steel, backfill or other materials.
SUMP:	A catch basin, usually at the bottom of a shaft but also found in other areas of the mine, where damage is collected and then pumped.
TAILINGS:	The refuse, waste, sediment, or tail product that has been left behind after an ore has been processed.
TEARING DOWN:	The dismantling of a rig or drilling equipment so that the area can be blasted or the equipment set up in another site.
TESTING:	The process of determining the course of and the target point reached in a hole, using one of several different azimuth and dip recording apparatuses small enough to be lowered into the hole. Other terms include: drill hole survey and directional survey.
THREE POINT CONTACT:	A method of mounting, climbing and/or dismounting equipment and/or ladders where the worker always has three points of contact i.e. either both hands and one foot or two feet and one hand.
TRACK VEHICLE:	Any motorized equipment mounted on tracks e.g. bulldozers and muskeg tractors.

GLOSSARY OF MINING TERMS - cont'd

TRAVEL WAY:	A passage for personnel, equipment and supplies.
TUGBOAT:	Strongly built, powerful boat used for towing and pushing. Also called a towboat.
TUGGER:	A small hoist used to move equipment and supplies.
TUNGSTEN-CARBIDE:	A hard, highly abrasive material used in the cutting edges of drill bits.
VEIN:	A rock fissure, crack, or fracture that is filled with mineralized material.
VENTILATION:	Method of supplying respirable air to workplace.
WASTE:	1. Rock that has no mineral value. 2. Refuse material.
WATERCRAFT:	Any motorized vessel used on water.
WATERLINE:	Hosing which transports drill water from the water source to the drill.
WEDGE:	A device that is used in a drill hole turn the direction (azimuth) as selected by the geologist.
WHEEL CHOCK:	Wedge-shaped piece of material used to prevent mobile equipment from rolling.
WHIP CHECK:	Cables attached to hoses and equipment to retard backlash in the event of disconnection under pressure.

GLOSSARY OF MINING TERMS - cont'd

WIRELINE CORE BARREL:	Double-tube, swivel-type core barrel; designed so that the inner-tube assembly is retractable. At the end of a core run, the drill string is broken at the top joint so that an overshot latching device can be lowered on a cable through the drill-rod string. When it reaches the core barrel, the overshot latches onto the retractable inner-tube assembly, which is locked in the core barrel during the core run. The upward pull of the overshot releases the inner tube and permits it to be hoisted to the surface through the drill rods; it is then emptied and serviced and dropped or pumped back into the hole, where it relocks itself in the core barrel at the bottom.
WIRELINE DRILLING:	The drilling of holes with a wireline core barrel.
WIRELINE DRUM:	A winding drum or hoist on which the wire line is wound when handling the inner tube and overshot assemblies of a wire-line core barrel.
ZERO STATE ENERGY:	The state where all possible energy sources have been isolated, bled, blocked and/or locked out on a piece of equipment or system for the purpose of preventing an inadvertent start-up or release of energy.